Drug & Cosmetic INDUSTRY

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Drug & Cosmetic INDUSTRY

DECEMBER 1941

CONTENTS

KEEPING POSTED	625
THE INDUSTRY AND WAR	630
BRITAIN'S WAR FORMULARY	631
HABIT FORMING DRUGS	632
COLD CREAMS	634
THE NEW N. F.	636
BROMIDES	637
ANTACID CLAIMS	641
MERCHANDISING NEWS AND PACKAGING NOTES	647
PACKAGES OF THE MONTH	653
NEWS	655
INDUSTRY'S BOOKS	669
PRODUCTION FORUM	673
COMPOUNDER'S CORNER	685
PERFUMERS' SHELF	688
ADVANCING THERAPY	691
READERS' QUESTIONS	698
PURCHASING DEPARTMENT	702

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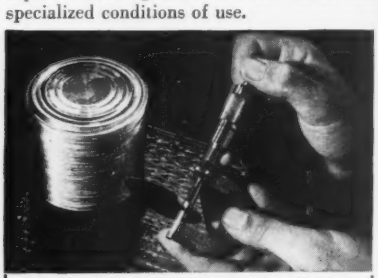
INSIDE NEWS

DECEMBER - PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1941

National Can Corp. Research Department Tin Plate Inspection!

In line with the constant effort to produce a better can, tin plate, the main raw material, is the subject of constant testing and study. The combination of tin plated steel is of course suggested by the name tin plate; steel for strength and tin for protection. However, though the only part presented to visual examination is the bright, lustrous tin coating, the physical and chemical properties of the cold reduced steel base are of great importance both from a fabrication and usage standpoint. While the mills producing tin plate maintain large staffs of technicians for the sole purpose of producing the best possible product, it has also been found advantageous for the can manufacturer to carry on separate investigations to cover their own specialized conditions of use.



The gauge, or thickness of the plate is of great importance, and is therefore under constant check. In the can laboratory and shop, the instrument used is the hand micrometer pictured.

The degree of hardness to which the steel has been tempered plays an important part in the fabrication and performance of the can. The above machine is used to test this quality.

This is a result of the fact that steel is a most versatile material, and its physical characteristics can be changed in many ways to meet the varied demands of can making.

For instance, the most desirable qualities for sanitary can ends are not the most satisfactory for either can bodies or deep drawing general line stock. Therefore, for each individual use a different combination of qualities is sought.

The photographs below, show a few of the various testing methods used to analyze these characteristics. (34) RESEARCH IS ORGANIZED THINKING.

The amount of distortion which a particular sample of steel can undergo before fracture is of major importance in deep drawing operations. The operator is using one of the specialized machines which examine this characteristic.

Aluminum from Clay

A newly discovered process for the economical manufacture of aluminum from clay instead of bauxite has been announced. This important new discovery was revealed in a paper read before the 34th annual meeting of American Institute of Chemical Engineers. It is believed that the process may hold the key to the United States independence of foreign sources of bauxite. There is said to be only a limited supply of bauxite in this country at the new defense rate of consumption.

The process consists of digesting selected high-silica clays with hydrochloric acid and decomposing the resultant product to get hydrochloric acid and aluminum oxide or alumina. The aluminum metal is then produced electrolytically in the conventional manner. (35)

Cod Liver Oil at Lofoten

An interesting sidelight on the British occupation of the Lofoten Island off Norway is that this primary center of cod fishing was just beginning the year's production of cod liver oil. Destruction of these plants prevented the cod liver oil from being used in the manufacture of glycerin, used in the manufacture of explosives. (36)

Drying Oil Properties Given to Isano Oil

The use of Isano oil in paints and other protective coatings is suggested by a new British patent. According to the technical literature, Isano oil is a rather viscous, pale yellow oil, obtained from the kernel of *Ongokea Klaineana*, a tree found wild in tropical Africa. The literature also states that the oil as extracted from the kernel shows no drying properties, even after the addition of large amounts of drier. When heat treated, it is said, a pronounced exothermic reaction takes place, making the temperature difficult to control, and generally producing either a gelatinous product or considerable decomposition.

The new patent, however, claims a method of controlling the highly exothermic action, and the conversion of the oil into a suitable media for paints and impregnating compositions. It is declared that the oil may be heated to about 280°C. without danger of its becoming uncontrollable if it is first mixed with one or more of the ingredients of paints and varnishes, such as another oil, resin, wax or high-boiling solvent or diluent.

Upon heating Isano oil with linseed oil, it is pointed out in example, a material superior in drying properties to linseed stand oil is produced. It is also claimed that the mixture of Isano oil with semi-drying oils, and even certain non-drying oils can be made

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BY
NATIONAL CAN

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to produce film-forming compositions; and that resins, waxes, and hydrocarbons also are improved by mixture with the oil and heat treatment.

Another means of using the oil described in the patent, is by applying a mixture of the raw oils and then baking the film. In this manner sheet metal may be coated with a mixture of Isano oil and linseed oil and then heat treated in a muffle furnace to produce a coating said to be very hard, and noteworthy in its resistance to acids, and alkalies.

The oil may also be treated, it is said, by heating it in combination with a high boiling solvent, and subsequently distilling off the solvent at reduced pressure. The separation of Isano oil into several fractions by selective solvent methods is also possible, it is claimed. The fractions may then be treated to yield materials exhibiting particular properties. (37)

U.S. to Increase Foodstuffs Production

A three-year plan for increasing foodstuffs production in unoccupied China for military and civilian requirements has been announced, according to the Department of Commerce. The goal for 1941 has been set at 1,743,500 tons in excess of last year.

The Ministry of Agriculture is encouraging increased food production through the grant of loans to various provinces and by providing the services of technical staffs. A special effort is being made to popularize new seeds and farming methods. (38)

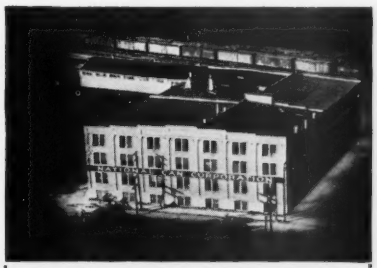
Improvements in Fruit Juice Process

A western university laboratory has announced improvements in the process for canning apple juice which retains practically all the fresh flavor and aroma. The first step in the process is the removal of all air from the juice. It is then pasteurized and canned in enameled lined cans, for which a special enamel is used. Several apple juice canneries are making use of the process, or modifications of it, this season.

A new richly flavored prune concentrate has also been perfected by this laboratory. In the past dried prunes have been extracted with water and the water extract then concentrated by boiling to a syrup. The new process consists of extracting the prunes in successive lots with hot water. As the extract progresses from one batch to the next it becomes a heavy syrup with the prune flavor and aroma intact. (39)

Cuban Peppers

Plans are being made in Cuba for canning a tentative minimum of 50,000 cases of peppers during the coming season. This venture should not immediately affect the export of fresh peppers, regardless of what results it may have in later years. (40)



Hamilton, Ohio plant of The National Can Corporation

Technical Topics

BENZYL BENZOATE pharmaceutical preparations are being advertised in England for use in the treatment of scabies. Abnormal living conditions resulting from the war are declared to have increased the incidence of scabies. (41)

NITROGEN TETROXIDE is being produced in experimental quantities in Britain. It is suggested as a vapor phase nitrating agent, particularly for the production of nitrates and nitro compounds in the fine chemical and pharmaceutical fields. The tetroxide has a boiling point of 21.3°C., and is offered in a purity of 95 percent, minimum. (42)

COPPER SULPHATE and sodium carbonate mixtures are being suggested in Britain for the effective retproofing of sandbags. It is declared that application of the mixture by a simple process makes them last eight times as long as when not treated. (43)

SOAP CONTAINERS were recently standardized as to size in the British Isles. Under the new set-up a seven-pound tin, a 28-pound pail for soft soap, and a 5-gallon minimum drum for liquid toilet soap were made standard. (44)

100% AMERICAN PIPES will soon be dipping into tobacco tins. Replacing roots no longer available from France and Italy, pipe manufacturers are using laurel roots which weigh from a few pounds to 800 pounds, from the mountains of western North Carolina. (45)

PETROLEUM RESIDUES suitable for the manufacture of refined petrolatum and dark wax materials are now being offered by a prominent American producer. The newly available material is declared to have a melting point between 110 and 140 degrees Fahrenheit. (46)

SILICOSUPERPHOSPHATE is to be produced in New Zealand for use in fertilizer compositions. The new fertilizer is claimed to have a lower moisture content than ordinary superphosphate. It will also contain serpentine, a silicate mineral found in commercial quantities in New Zealand. (47)

A LIQUID FUEL is to be manufactured from saw mill waste in a new plant being erected in Switzerland. The fuel is to be marketed under the name of "Alketone" and will consist of a mixture of crude wood alcohol and acetone. (48)

AGARS suitable for use in bacteriological procedures and in pharmaceutical operations are obtainable from various species of seaweed growing in the waters around the British Isles according to preliminary investigations. Further observations are being made to ascertain the particular parts of the coast on which supplies of suitable seaweeds grow, and modern methods for the production of Agar in quantity. (49)

PENICILLIN, the bactericidal agent occurring in species of *Penicillium* molds is so effective against certain types of pathogenic bacteria that it will prevent their growth when present in the concentration of only one part in a million, it is declared in recent British medical literature. It is also pointed out that the toxicity of penicillin is low, and that its efficiency is not reduced by the presence of pus, serum, or decomposition products of body proteins. (50)

DIPHENYL impregnated wrappers have been found valuable for the prevention of decay in oranges in transit, according to investigations carried on by the Hebrew Institute, Jerusalem. The report covers the preliminary use of such wrappers during the last five years. It is also stated that physiological tests have shown that diphenyl is completely harmless in quantities several times those to which workers are exposed in the manufacture or use of impregnated papers. (51)

For further information on any of these articles write to National Can Corp., 110 E. 42nd Street, New York City.

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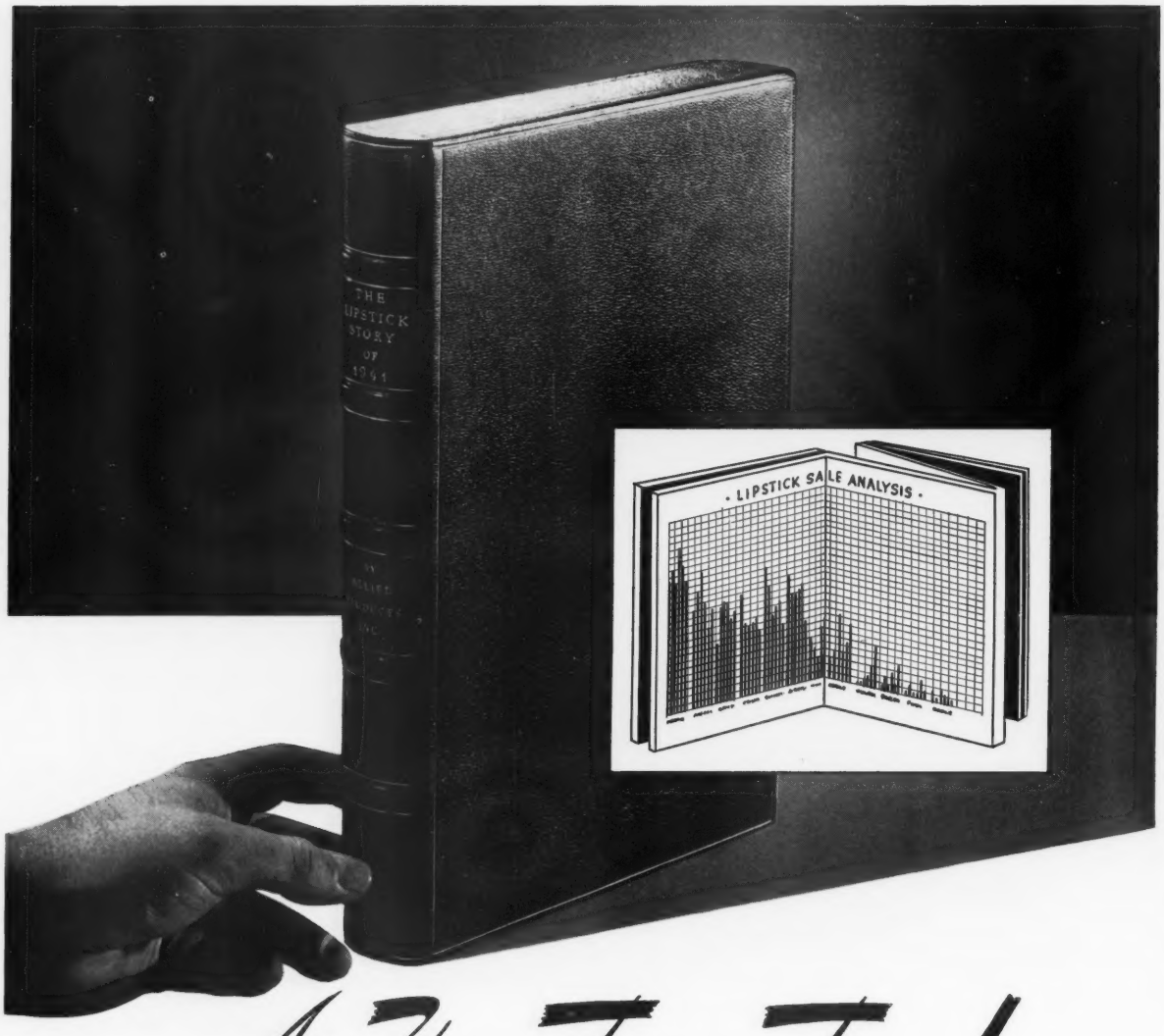

At Your Finger Tips!

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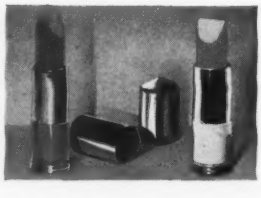

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FORWARD MARCH!

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CHRISTMAS GREETINGS

★

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Best Wishes for the New Year

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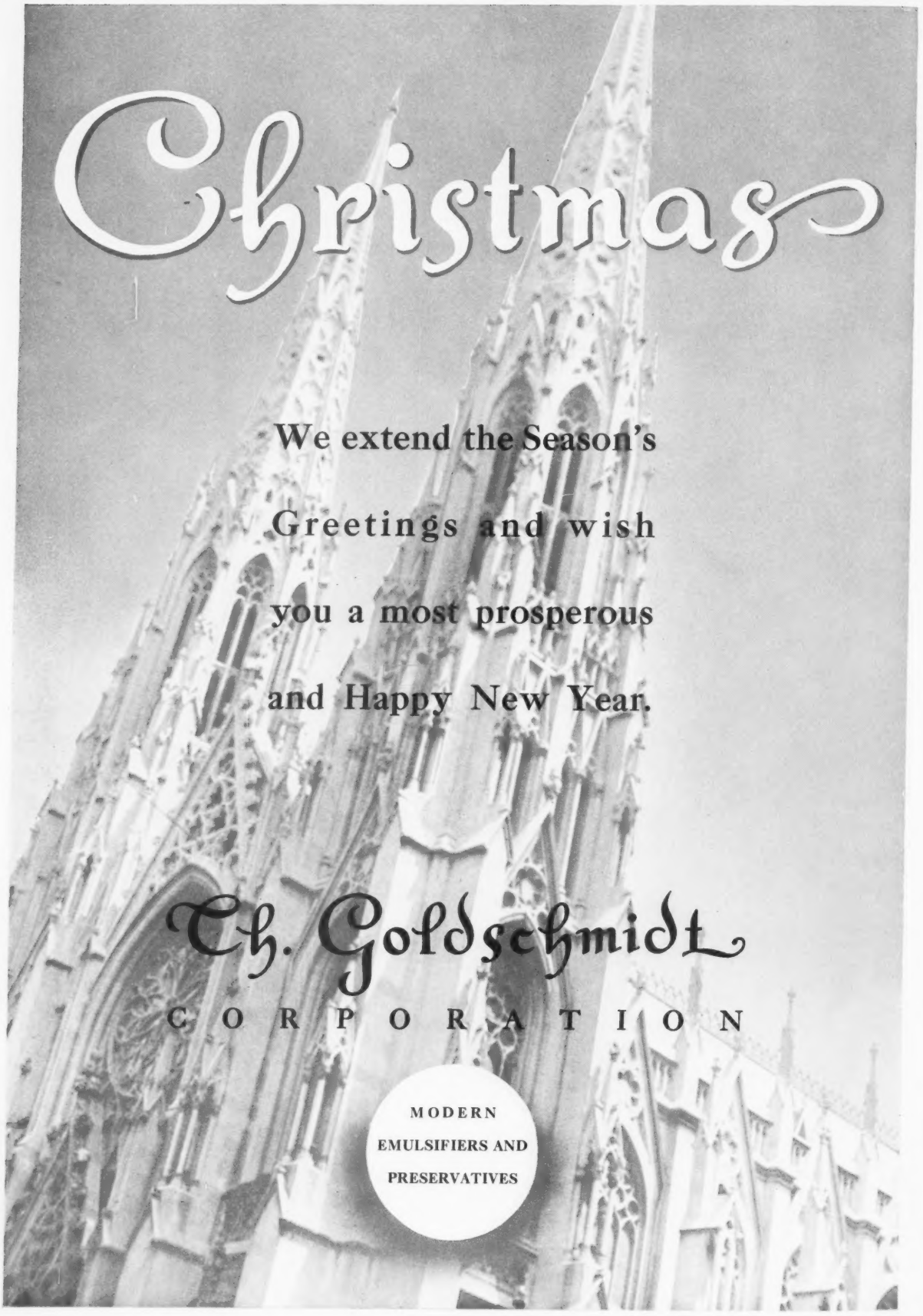
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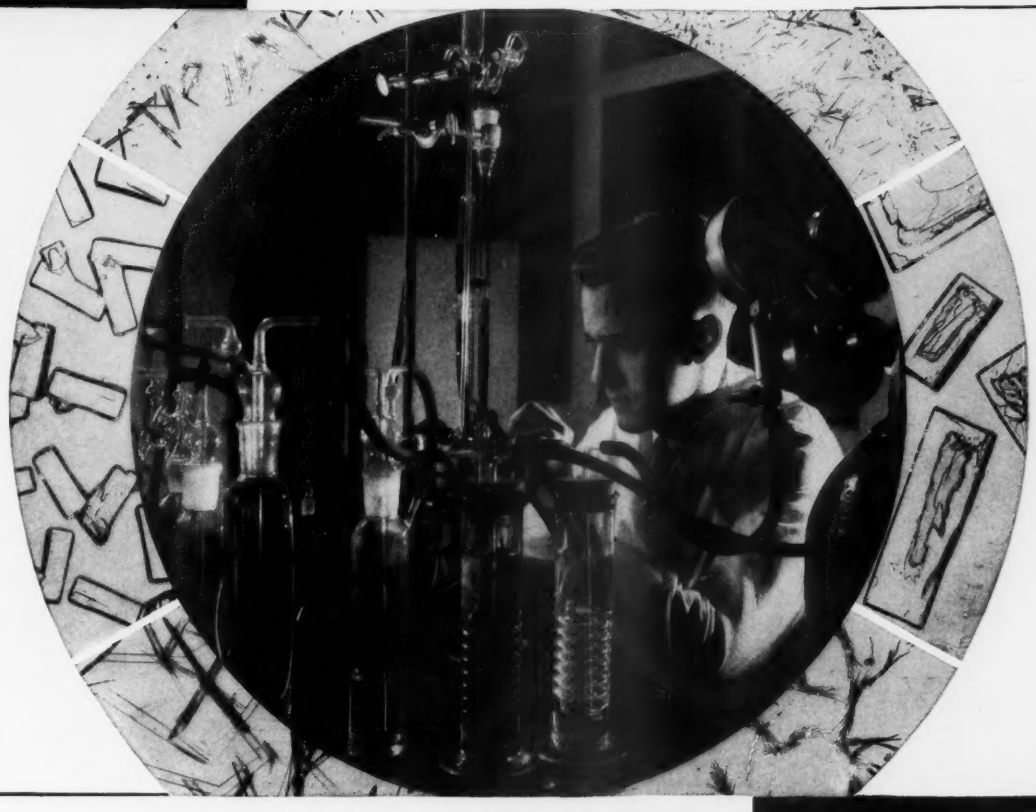

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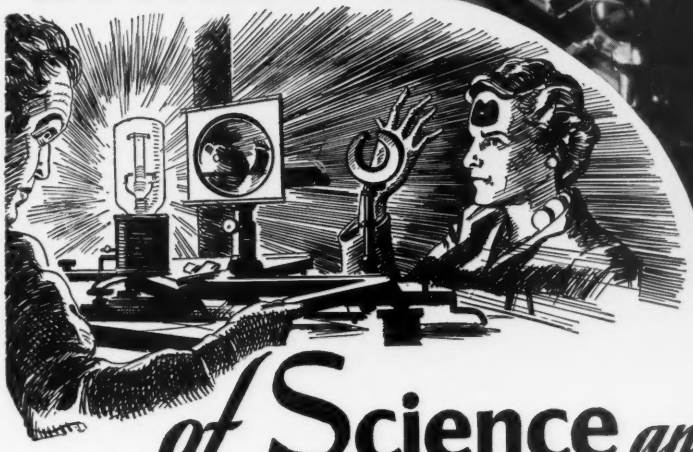

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COSMETIC FORMULAS

MODERN COSMETICS

by

FRANCIS CHILSON

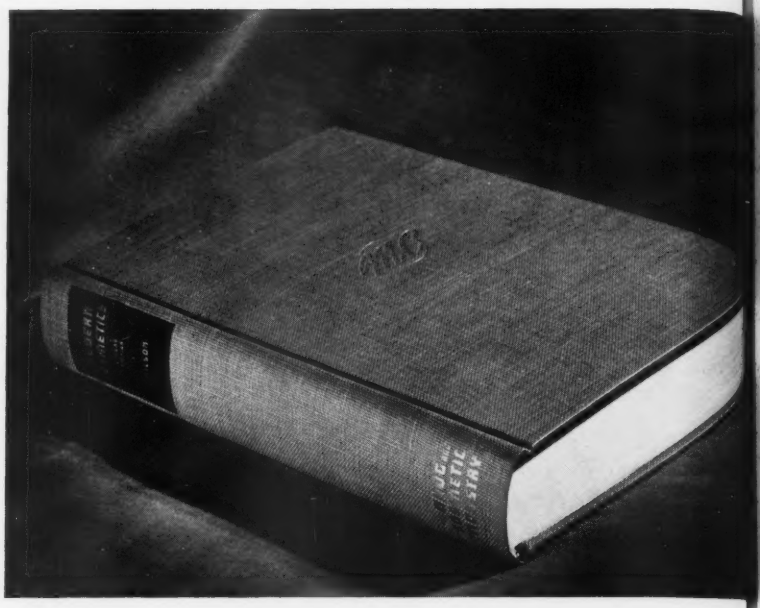

TABLE OF CONTENTS:

Chapter

1. The Skin
2. Cosmetic Classification
3. Cosmetic Duplication
4. Face Powder
5. Toilet Powders
6. Tooth Powders
7. Manufacturing Powders
8. Powder Packaging
9. Cleansing Creams
10. Lubricating (Tissue) Creams
11. Vanishing Creams
12. Cold and All Purpose Creams
13. Hand Creams
14. Brushless Shaving Cream
15. Shaving Creams
16. Astringent Creams
17. Bleaching Creams
18. Acne, Blackhead, Eczema Creams
19. Scalp Ointments
20. Tooth Pastes
21. Facial Masks
22. Cream Equipment
23. Emulsifying Machinery
24. Paste Equipment
25. Packaging Creams and Pastes
26. Liquid Creams
27. Hand Lotions
28. Mouth Washes
29. Skin Toning Lotions
30. Astringent Lotions
31. After Shaving Lotions
32. Bleaching and Freckle Lotions
33. Acne, Blackhead, Eczema Lotions
34. Alopecia Tonics

Chapter

35. Dry Scalp and Dandruff Tonic
36. Oily Scalp and Dandruff Tonics
37. Soapless Shampoos
38. Soap Shampoos
39. Equipping The Liquid Room
40. Filters and Filtration
41. Packaging Liquids
42. Lipsticks
43. Cream Rouges
44. Paste Rouges
45. Eye Shadow, Eyebrow Pencils and Mascara
46. Compacts—Powders and Rouges
47. Liquid, Cream and Cake Powders
48. Manicure Preparations
49. Deodorants
50. Depilatories
51. Sun Preparations
52. Burn Preparations
53. Eye Preparations
54. Waving Fluids, Jellies and Powders
55. Miscellaneous Hair Preparation
56. Brilliantines
57. Bath Preparations
58. Miscellaneous Cosmetics
59 Equipping the Small Plant
60. Factory Construction
61. Handling Materials
62. Packaging Equipment Layout
63. How to Lay Out a Cosmetic Factory
64. Packaging

Appendix
Tables and Useful Data
Buyers Guide
Index

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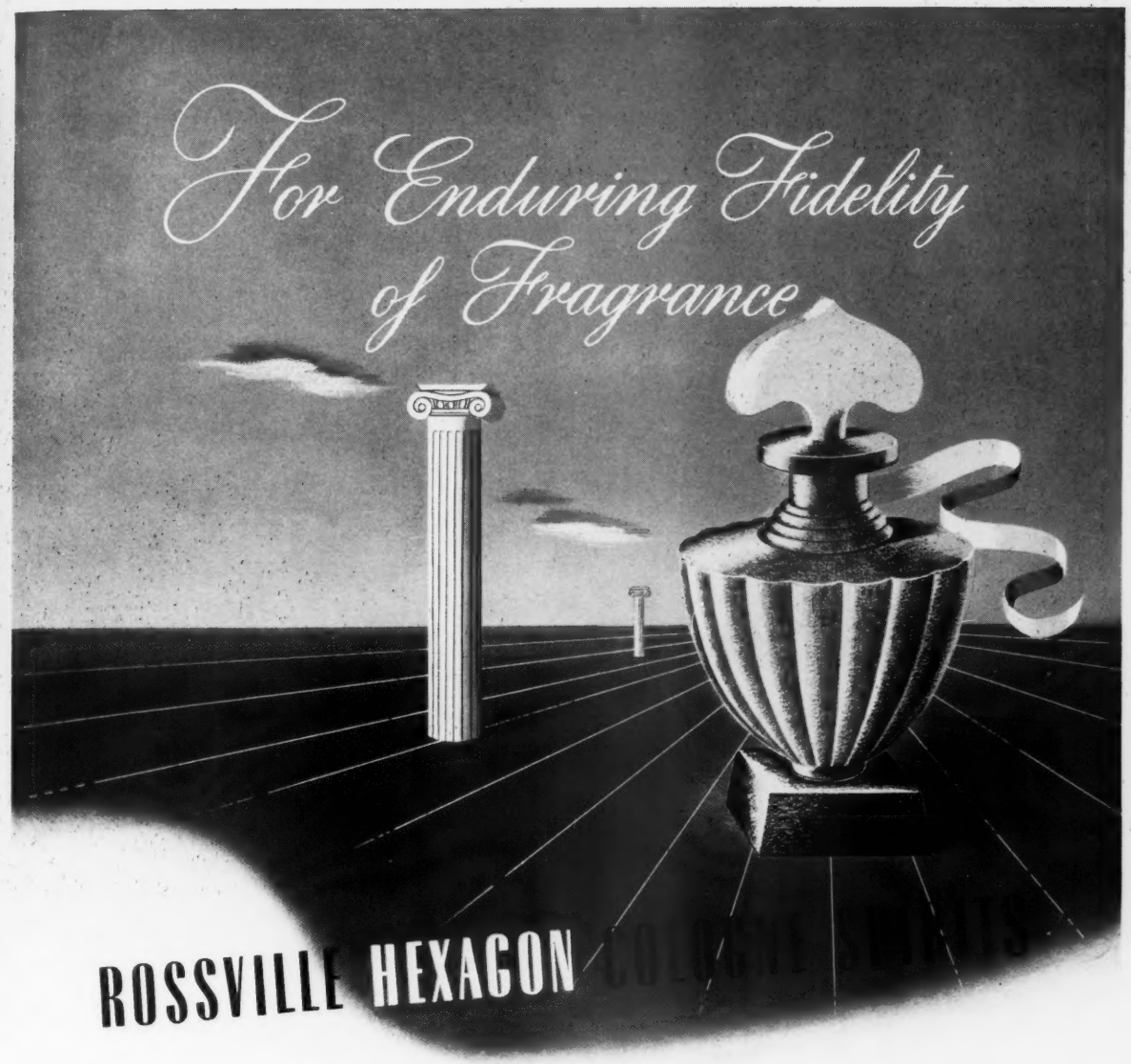

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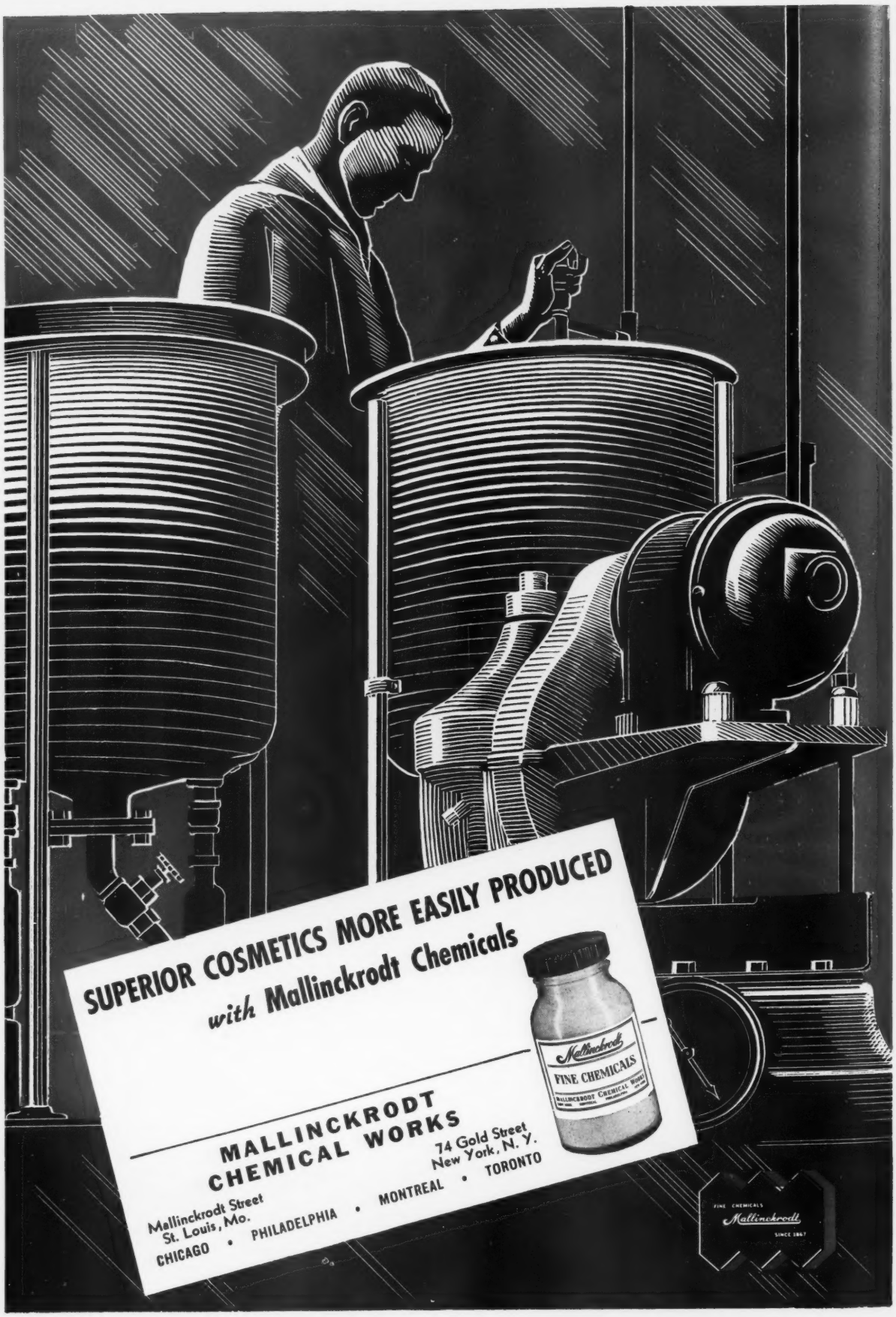
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KEEPING POSTED

Health Supplies Branch

The new Health Supplies Branch of the Division of Purchases of the OPM, which is under the direction of William M. Bristol, Jr., has jurisdiction over drugs, medicines, dental supplies, hospital supplies, toilet goods, and cosmetics. This branch was formerly part of the old Health Supplies and Fire Equipment Branch which was under the direction of W. Emmet Bittner, who has returned to his position as purchasing agent for the Diamond Alkali Corporation. The other part of the old branch is now known as the Safety and Technical Equipment Branch and is under the direction of Oakley W. Dexter, purchasing agent for the Crown-Zellerbach Paper Company of San Francisco.

Government Business

Late last month a booklet entitled "Doing Business with the Government" was issued by the Treasury Department. The booklet, which is designed to supply information to manufacturers and dealers on procedures necessary to establish and maintain business relations with the Procurement Division of the Treasury, answers many inquiries which are being received. Included is a synopsis of laws affecting Federal Procurement, an explanation of the Division's functions and how to get on the bidder's list, addresses of the State Procurement offices, and descriptions of the types of purchasing in which the Division is engaged. Copies may be obtained free from the Procurement Division, Washington.

Ceiling on Paraffin

A price ceiling was placed on paraffin wax effective December 1, by the OPA. Crude paraffin cannot be sold higher than 4.25 cents per pound (122° to 124°), and refined wax cannot be sold higher than 5.20 cents per pound (123° to 125°). Crude wax has increased from 2.8 cents per pound to 6.25 per pound, and average price of this grade during 1940 was 3.86 cents per pound.

Titanium Dioxide Allocated

Titanium dioxide is now being distributed under an allocations system ordered to become effective January 1, under the order of the Director of Priorities. The purpose is to set up a defense pool to take care of all mandatory orders and to prorate the remainder on an equitable basis to all customers. The defense pool for the first month is set at 20 per cent. of each producer's daily production, and this percentage may be varied from month to month as defense needs vary. The product is produced from ilmenite ores, with the bulk of this country's supply formerly coming from India. When the possibility of increased difficulties was realized, additional American mines were developed. These, together with stocks on hand, will prevent any curtailment of output caused by cessation of imports. American production of titanium pigments has more than doubled since 1937.

N. N. R. Official in N. H.

The State of New Hampshire now has a law which recognizes New and Non-Official Remedies as a standard compendium along with the U. S. P. and the N. F. This law, which became effective on October 1, this year, is intended to curb further the promiscuous or unlicensed sale of potent drugs, and the three compendia are to be used under this law in determining what drugs are affected. This is an entering wedge obtained by the A. M. A. to control the sale of drugs throughout the country. Certainly this adoption of N. N. R. as a legal compendium will be brought to the attention of legislators throughout the country as the A. M. A. attempts to increase its power over the drug

manufacturer and over the industry. Since the A. M. A. has complete control over N. N. R., more drugs are likely to be ruled dangerous in New Hampshire than in any other state. Manufacturers will do well to watch carefully the operation of this law in New Hampshire, and also to be on guard against further attempts to have this book adopted legally as an official compendium.

F. T. C. Wants Warnings

The Federal Trade Commission has changed its mind regarding warning statements that must be made in advertising. Formerly, laxative advertising did not have to include any warning statement, but other products which had warning statements on their labels had to contain a statement in the advertising that the products must be used according to directions. Now the Commission has decided that all products which bear a warning on their labels, including laxatives, must contain in the advertising the following statement: "Caution. Use only as directed." Manufacturers who signed stipulations in accordance with the former opinion of the Commission are being informed that they must make the change now ordered.

New Stipulation Form

We note that the FTC has a new form of stipulation which begins: "Based upon information and literature available at this time, . . . hereby admits . . ." This is the first time that these stipulations have not been drawn up so that they would be binding for all time. Many objections have been heard from time to time regarding the statements that some manufacturers signed, such statements being all-inclusive and extremely broad. It is well that this new form is being adopted since change due to scientific research is inevitable in this industry.

Patents Expire

Insulin patents expire December 24, 1941, and patents on the product sold under the trade-marked name of Mercurochrome expire on January 1, 1942. The product sold under the trade-marked name of Mercurochrome is being admitted to the N. F. VII under the name of Merbromin, since the trade-mark, Mercurochrome, is still the property of Hynson, Wescott & Dunning.

Insulin is being admitted to the U. S. P. and the Revision Committee will shortly formulate standards for control of this product. It is stated that several foreign manufacturers have shipped insulin to this country to be sold after the expiration of the patent. It is proposed that the two-assay control which now prevails under the patents, be continued.

Propylene Glycol Approved

The Food and Drug Administration has approved the use of propylene glycol as a substitute for glycerine in flavorings and foodstuffs, as well as in drugs. The FDA says in part:

"Careful review of all of the available results does not show that, in the amounts normally used in food products, propylene glycol is to be regarded as a harmful ingredient. We, therefore, will not interpose objection to the proposed use of this substance to replace glycerine or other solvents in food products from the standpoint of the requirements of the Federal Food, Drug, and Cosmetic Act."

No More Tinfoil

Lead and tinfoil cannot be used in packaging cigarets and other tobacco products, chewing gum, candy, all beverages, and other items after March 15, 1942, if an order issued by Donald M. Nelson, Director of priorities, is finally put into effect. The order has been suspended for thirty days pending an investigation as the result of a protest by a foil manufacturer. The reason for the order is that lead going into foil has increased from 2,000 tons a month at the beginning of 1941 to 6,500 tons a month at present, with the demand increasing rapidly. The swing to lead came about through the inability to replace aluminum stocks. Tin savings under the order are estimated at 250 tons a month.

Cold Product Claims

The Food and Drug Administration is drawing tighter lines against the labeling of cold preparations, contending now that the word "cold" in the name of a preparation is in violation of the law. A court decision will eventually be necessary to determine whether this contention is correct. The FDA objects to the statement "for the relief of the discomforts of a cold," and also objects when the words "miseries" or "symptoms" are substituted for "discomforts". Officials claim this statement is too broad, since they claim there are symptoms, discomforts, or miseries caused by a cold which a particular product under consideration would not relieve. Therefore, claims must be specific as to just what symptoms or discomforts they will relieve.

Laboratory Priorities

The OPM is giving further aid to research laboratories by assigning a preference rating of A-5 to acquisition of scarce materials required by manufacturers of the necessary laboratory chemicals and equipment. Producers who supply laboratories engaged in research, testing, analysis, plant control studies, clinical studies,

and academic studies are covered by the order which became effective when issued on November 15. The rating is also applicable to packaging material required for shipping the products needed.

U. S. P. Convention 1942

The U. S. P. Convention will reconvene in Cleveland on April 7, 1942 at the Statler Hotel in that city. This meeting is the follow-up of the 1940 convention at which it was decided that the convention should be called into session again at some future date to receive the report of the committee which was working on revision of the constitution and by-laws.

Health Supplies

The Health Supplies Rating Plan is to be amended so that it will cover all medicinal products and give them a broad A-10 preference rating so to be able to secure all scarce materials. This would be a real improvement over the present method of applying the plan principally to bulk medicinal chemicals. However, the proposed amendment would not extend packaging materials, it would not provide a higher preference rating where it would be required, and it would not provide for a centralized administrative control of preference ratings for all drug materials and supplies.

Cellophane Order Change

In the original order prohibiting the further use of transparent cellulose in this industry the users of the material were given sixty days to dispose of their stocks, and the manufacturers of the material were given the same sixty days to ship material on hand to these users. Under this order it was possible that a user of the material might receive a large shipment from his supplier on the afternoon of the last day on which he was allowed to use it. This has been corrected and permission to use material on hand after the last day can be obtained upon application to the OPM. There will be no difficulty in obtaining permission if the manufacturer of the transparent cellulose and the users of it have not purposely tried to defy the order.

Narcotics for Defense

The Bureau of Narcotics has advised manufacturers that information must be sent to the Bureau in the case of military, naval, and lend-lease orders which are awarded requiring the use of codeine, morphine, and opium. Manufacturers who have been awarded such contracts should notify the Bureau as to the full circumstances, stating from whom the order was received, the kinds and quantities of narcotics necessary for filling the order, and whether or not the narcotics are to be purchased or filled from stocks on hand. If narcotics must be purchased for the order, or for replacement, then the name of the narcotic manufacturer and the kinds and quantities to be purchased must be given.

Dr. Herwick, Drug Head

Dr. Robert P. Herwick has been appointed by Commissioner Walter G. Campbell, of the Food and Drug Administration, to succeed Dr. Theodore G. Klumpp as head of the Drug Division. Dr. Herwick was formerly assistant chief of which Dr. Klumpp was the head. Dr. Klumpp resigned last spring to become secretary of the Council on Pharmacy and Chemistry of the American Medical Association, and is now president of Winthrop Chemical Company.

Dr. Herwick, who joined the FDA in 1938 as an associate medical officer, has spent as state toxicologist in Wisconsin, has spent three years in private medical-legal work, and has been assistant professor of pharmacology at the University of Wisconsin, Chicago Medical School, and Georgetown University Medical School. He has a B. S. in Chemistry from Pennsylvania State College, an M.S. and Ph.D. in Pharmacology from Rush Medical School, and a law degree from Georgetown University. Dr. Herwick is only thirty-six years old, indicating that the greater part of his time has been spent in educational pursuits than in practical experience. This is the man who will pass upon new drug applications in the future.

Vitamin Shortages

The shortage of vitamins continues to cause manufacturers trouble. Supplies of vitamin A have become short, although this was not generally anticipated some time ago. The shortage of cod liver oil was anticipated, but it was thought that other fish liver oils would produce all the vitamin A that would be needed. However, the disappointingly low catch of sharks for shark liver oil on the West Coast has been an important factor in the stringency of vitamin A. Other contributing factors are the fortification of oleomargarine with vitamin A and the large purchases of fish liver oil by the Federal Surplus Commodity Corporation for lease-lend shipments to Great Britain.

Vitamin A supplies now come principally from the livers of halibut, shark, and black cod from the West Coast, while a small amount of halibut livers is available on the East Coast. Since fish livers are merely a by-product of the fish industry, the number of livers cannot be doubled without the people of the country consuming twice as much of the fish from which the livers are desired. The shark liver industry on the West Coast is different from other fish industries in that shark livers are the major product.

The tightness of vitamin A supplies is easing somewhat due to some manufacturers of multi-vitamin

preparations reducing the vitamin A potency of their capsules from 10,000 units to 5,000 units, and by poultry oil vitamin A potency being reduced from 3,000 units to 1,500 units.

Vitamin D has been scarce ever since our troubles with Japan became serious. This is because very large supplies of vitamin D came from tuna fish livers obtained from Japan. Therefore a swing to viosterol has taken place in many instances in human products, another synthetic product, D_3, being available for poultry use. The vitamin D_3 is also applicable for use upon humans, but it costs more than viosterol which works on humans but not on poultry. Vitamin D_3 is irradiated 7-dehydrocholesterol.

Relief of the stringencies existing in vitamin B_1, or thamine; vitamin B_2, or riboflavin, or vitamin G; nicotinic acid; vitamin C, or ascorbic acid, must come about through increased manufacturing facilities of these chemicals and increased supplies of raw materials for their production. Expansion of these plant facilities has been under way by several companies for some time and within the next few months, these manufactured vitamins should be in plentiful supply.

OPA Appointments

Recent appointments to the Chemicals, Drugs, and Paints Section of the OPA are James J. Ford and Warren E. Wiley. Mr. Ford was an executive with McKesson & Robbins for eight years and previously specialized in cost and accounting control installations in diversified industries. His home is in Yonkers, N. Y. Mr. Wiley has eleven years experience with large chemical and pharmaceutical manufacturers in cost accounting and budgetary control. In 1941 he received an honorary LL.D. degree from Blackstone College of Law in Chicago. His home is in Capeville, Va.

OPA and Trade Associations

The OPA will not talk to trade association representatives but only to individual manufacturers. The reason for this, as explained by the OPA, is it is believed that trade associations would be liable to prosecution under the anti-trust laws if they engaged in such activities. The policy of the OPA came to light in a letter which Price Administrator Leon Henderson wrote to the Independent Petroleum Association of America. The OPA also explains that it is more difficult to deal with trade associations than with individual members of an industry because trade associations have to check back with their members before taking any definite stand on matters which had not been previously passed upon, and this would tend to delay arrivals at conclusions.

There is considerable doubt that under present conditions, trade associations would be in legal jeopardy in discussing prices with the OPA. After all such action is brought about by an unlimited national emergency, and furthermore, the discussions with the OPA would be on the subject of lowering prices,—not raising them. However, it is said that the OPA also feels that trade associations do not completely represent industries since there are many members of practically all industries who are not members of their respective trade associations.

Medicinal Chemicals

Under the abnormal conditions that prevail, manufacturers of many medicinal chemicals are running their plants twenty-four hours a day, seven days a week. Expansion of plant capacity is not considered a wise step in many instances, and furthermore it is so difficult to obtain the necessary supplies which to expand production that expansion is held off as long as possible.

To give some idea of how heavy the demand for medicinal chemicals is at the present time, those in the know estimate that production of sulfonamide drugs during the current year will total 2,500,000 pounds. Such a production is astounding when it is considered that these productions are used in small dosages and only under the direction of a physician. However, the government demand for these drugs and the export demand will continue to push production to capacity for some time to come.

Further instances of the pressure upon manufacturers of medicinal chemicals are the fact that two chemicals that had previously suffered a most serious decline in volume as the result of attacks made upon them as being dangerous, are now being sold in volumes at least equal to or above the greatest volumes at which they were ever sold. These two chemicals are cincophen and aminopyrine. Producers of these chemicals state that due to present conditions in this country and the export demand for all chemicals, these two products have recovered completely the losses that were sustained as the result of the attacks made upon them.

Alcohol Tax

The matter of the refunding of the one dollar advance in the tax on pure alcohol in the event of its use in foods or drugs is not dead. Four identical bills are now before Congress looking toward an amendment of the revenue act to effect such a refund. Therefore, it is up to those interested in such a refund to get busy and try to influence their Representatives and Senators in favor of the enactment of this amendment.

Alcohol Supplies

Alcohol supplies are still tight with the future not very bright. The blackstrap molasses, from which most of the alcohol is made, is all used up for the year 1941,

and the 1942 crop will not be available until early next year. Furthermore, there is a feeling that the 1942 crop of molasses will not be sufficient to supply the demand. There is talk of alcohol being produced from grain and other substances that will not be 190 proof. Therefore, manufacturers in this industry should ascertain if they can use alcohol of lesser proof than 190 and what adjustments in their products would be necessary to make the use of this lower proof alcohol possible. The more that it is possible to use lower proof alcohol, the greater will be the supply of alcohol for this industry.

That Cellophane Order

CELLOPHANE LIMITATION ORDER L-20: The unhappy history of L-20 in just one short month gives an excellent insight into the difficulties of administering priorities. On November 7, just about a month ago as this is written, Donald M. Nelson, director of priorities, issued L-20. The full text of this order appeared in our November issue, but certain portions of it will bear repetition in view of subsequent developments. Note the language of the preamble (the italics are ours):

"To limit the use of cellophane and *similar transparent materials derived from cellulose.*

"Whereas, the manufacture of cellophane and similar transparent materials derived from cellulose requires utilization of large quantities of *chlorine, phenol and glycerine;* and

"Whereas, national defense requirements have created a shortage in these materials for defense, private account and export; action has already been taken to conserve the supply and direct the distribution of *chlorine* and *phenol* to insure deliveries for defense requirements; and

"Whereas, present supplies of these materials will be insufficient for defense and essential civilian requirements;

"Now, therefore, it is hereby ordered that: etc."

The order went on to prohibit the use of cellophane or similar transparent materials derived from cellulose for packaging or manufacturing cosmetics and soaps, as well as various other products. It restricted deliveries and set a time limit in the following language:

"(c) *Restrictions on Deliveries.* No supplier shall knowingly, directly or indirectly, deliver or cause to be delivered any cellophane or similar transparent material derived from cellulose, and no person shall accept the same, to be used for packaging or manufacture of any of the materials listed in (b) hereof.

"(d) *Non-applicability to Existing Stocks.* The terms of (b) hereof shall not apply to stocks of cellophane or similar transparent materials derived from cellulose in the hands of users at the date of issue of this order, and the terms of (c) hereof shall not apply to stocks of cellophane or similar transparent materials derived from cellulose in the hands of suppliers and which have been heretofore so cut, processed, or printed as to render impracticable use by persons other than those prohibited from using such materials under (b) hereof. Provided, however, that all such stocks shall be used in packaging or manufacture, as the case may be, within sixty days of the date of issue of this order."

The reaction in this industry was immediate to that portion of the order which gave the cosmetic manufacturer only 60 days to dispose of packages employing cellophane in production or in storage. It seemed to indicate, for example, that any powder boxes using cellophane as the drum top would have to be shipped before January 8 or destroyed or stored until the end of the emergency. It was obvious that all packages employing cellophane could not be shipped by that date for in the ordinary course of events cosmetic manufacturers would have packages on hand or in production for 60 to 75 per cent. of next year's requirements by this time. But under the highly unusual conditions which have existed during the current year, cosmetic manufacturers have been working further ahead than ever so that it is safe to say that most of the bigger manufacturers had practically all of their package requirements for 1942 in process or in production as early as July and August of this year.

It was equally obvious that it was not the purpose of this order to require the destruction of all cosmetic packages employing cellophane for there was nothing to be gained by that and the only possible result would be waste—not only of cellophane but other materials, like paperboard, which are also scarce. And the idea of storing the packages or their component parts until the emergency is over is equally fantastic as an alternative, since the net result in that case would also be waste.

In answer to appeals directed to John B. Smiley, Bureau of Industrial Conservation, Room 2138, Temporary Building D, Washington, D. C., by cosmetic manufacturers and presumably by members of other industries affected a set of opinions and interpretations with respect to L-20 were issued on November 22. These were in question and answer form and those relating to the 60-day clause read as follows:

"6. *Question* Does the requirement that stocks of cellophane be used within 60 days apply to a wholesaler, jobber, or retailer who received the products already wrapped in Cellophane and does not package it himself in cellophane?

"*Answer* No. The Order only applies to those people who package or manufacture with cellophane.

"7. *Question* Does the requirement that stocks in the hands of Suppliers so cut, processed, or printed as to render impracticable use by persons other than those prohibited must be used within 60 days of the date of issue of this order mean that the user must so dispose of them even though, he himself, does not have the stocks for 60 days?

(Continued on page 649)

THE INDUSTRY AND WAR

Now that this country has been attacked and is in a declared war with Japan, this industry, together with all other industries, will be called upon to subordinate all other interests to rapid and successful prosecution of the war effort. The situation has changed radically from a defense effort to a war effort. Now there can be no wasting of time or postponement of activities. This country is in a war the outcome of which will determine the future of this nation and everyone in it. Naturally no one can now attempt to promote his own interests when such promotion in any way conflicts with the success of the war effort.

This industry has been quite well prepared for this effort up to this time. The drug and medicinal branch of the industry has been cooperating with the defense effort for several years past, and the chemical manufacturers have likewise been cooperating to a very high degree. These manufacturers know what is expected of them and they are prepared to go still further in the delivery of necessary products to the government for the use of the armed forces and for such other uses in the war effort as are necessary.

The cosmetic branch of the industry has not been called upon for cooperation to the same degree as has the drug branch. However, during the past year at least, they have been learning some of the things that will be expected of them. Cosmetic manufacturers will be called upon to cooperate principally in the direction of continuing their businesses with less of a great many raw materials and supplies which they have been accustomed to obtain freely. They had to give up aluminum a year ago, and now they will be forced to give up a large part, if not all of their brass, cellophane, and other packaging materials. They will have to find substitutes for these and other supplies. They will have to curtail their use of paper. These are some of the packaging materials that were curtailed before hostilities started, additional ones will doubtless be added in the near future, and further curtailment of those things already partly curtailed will probably be ordered.

Cosmetic manufacturers have likewise been curtailed as to their use of some chemicals and other raw materials. This curtailment will doubtless be increased both as to the number of items and as to the percentage of those items already curtailed. There is no way of forecasting the scope or the extent of these curtailments.

However, the unity of this nation has never been greater in its history than it is in the present conflict, and for that reason, cooperation of all in this industry is expected to be at the highest peak. This is certainly no time for anyone to expect to improve his profit position, and even if he should, the government will take his profits away from him to help pay for the war effort. Further, this is certainly no time for any business concern to improve its prestige or relative position in an industry, and attempts in this direction will doubtless be thwarted.

Manufacturers in this industry can serve in the present emergency by conducting their businesses to the best of their ability. But, at the same time, they must conserve everything and avoid all possible waste. No matter how small a saving might appear in itself, the spreading of this saving to all users in the country will mean a great deal. And only by everybody saving everything will there be enough of a great number of things to satisfy our demands.

It is fortunate indeed that the country has been on a defense basis for some time past so that the transition to a complete war basis will not be as severe as it otherwise would be. Our government is well organized to prosecute this war as it should be prosecuted, and all that is needed is the full cooperation of the people of the country to make that prosecution vigorous and successful.

There is no need for anyone in this industry to become panicky. Business will go on and manufacturers should continue to operate their businesses as usual until such time as curtailments are ordered or they are ordered to shift their efforts to war production.

BRITAIN'S WAR FORMULARY

For the duration of the war, Britain has now published a National War Formulary which will replace the National Formulary. The National War Formulary will be the main guide to prescribing and is to be adopted by the large London hospitals.

Some of the aspects of this new work are set forth by "The Pharmaceutical Journal" (London):

"Throughout the Formulary the greatest care has been exercised in avoiding the inclusion of ingredients which are valuable in munitions and in agriculture. An outstanding example is seen in the reduced use of alcohol. The names of only twelve tinctures occur in the book, and of these six are exclusive to the Children's Section, one (aromatic tincture of cardamon) is included in both this and the General Section and five tinctures (chloroform and morphine, digitalis, opium, quillaia and strong tincture of ginger) are in the main part of the Formulary. By comparison it may be pointed out that there are 66 tinctures mentioned in Part III of the Drug Tariff and of these no fewer than 48 are starred. "Needs must . . ." and however much chemists may view with surprise the almost complete substitution of liquid extracts for tinctures it is apparent that in wartime such a course must be taken. The average doses of some of the liquid extracts are very small, as one would expect; those of ipecacuanha, belladonna and nux vomica are only half a minim, thus necessitating the measurement of such small quantities as six minims for a six ounce bottle of mixture with a tablespoonful dose. Unquestionably the easiest way in which to dispense these small volumes is by means of a ten-minim pipette with half-minim graduations. An interesting point may here be noted. So far as we are aware this is the first time that liquid extract of belladonna, which is made from the root, has been employed, or recommended to be employed, on any large scale for internal use. Generally speaking, preparations of the root have been reserved for external application, although the 1932 Pharmacopoeia broke a long-established precedent by prescribing a dose for this liquid extract.

"A further example of steps taken to economize in alcohol is seen in the provision of a formula for a borax and formaldehyde solution containing:—

Borax	15 gm.
Solution of formaldehyde	25 mils
Phenol	4 gm.
Water	to 1000 mils

and recommended for use instead of alcohol for preserving instruments and suture needles in sterile condition and free from rust. We understand that this solution has been employed at some of the large London hospitals and found to be satisfactory, although it should not be used for hypodermic needles and syringes. This is one of the preparations mentioned last week that obviously cannot be accepted as part of medical benefit. Where alcohol is not entirely replaced the proportion has been reduced whenever such a course is possible. A formula which demonstrates this is that for evaporating lead lotion where the amount of alcohol has been cut to half and the provision inserted that 4 instead of 8 fl. oz. should be dispensed unless otherwise ordered. For the prevention of bed sores a zinc sulphate lotion containing 1 per cent. of the salt and colored with Bordeaux B is put forward as an alternative to I.M.S. or surgical spirit.

"It is not surprising that glycerin should have been omitted from a number of preparations. Although compound glycerin of thymol is still mentioned the suggestion is made that in wartime compound thymol mouth wash, a solution of sodium phenate containing 0.03 per cent. of thymol with a little methyl salicylate and oil of peppermint and colored with Bordeaux B, should take its place. It is difficult, even in wartime, to understand how such a widely prescribed preparation as compound glycerin of thymol can be replaced by this new product, and a more suitable course might be for the Codex to modify the original formula by omitting the glycerin. For intra-uterine use there is a Liquor Glycerini Salinus containing 10 per cent. of sodium chloride and 25 per cent. of glycerin.

"Among the substances which the Formulary states should not be prescribed in wartime or should only be prescribed in certain specific conditions are linseed poultice, capsules (tablets or pills should be substituted), confections, cod-liver oil emulsion (emulsion of vitaminized oil should take its place), agar, enemas containing olive oil or glycerin, extract of malt (to be reserved for children and tuberculous patients), liniments containing aconite and belladonna, soap liniment (owing to its high alcohol content), boric acid lotion (to be reserved for ophthalmic use, and for other purposes physiological saline solution should be employed), mercurial lotions, bismuth and its salts (reserved for the treatment of syphilis and tropical diseases, recom-

(*Continued on page 643*)

HABIT-FORMING DRUGS

THE regulations defining habit forming drugs under section 502 (d) of the Food, Drug, and Cosmetic Act have been drafted in final form by the Food and Drug Administration. Errors in the regulations must be called to the attention of the FDA within twenty days.

Interesting in the proposed order are the statements regarding the determination of what drugs should be included in these regulations. These statements follow:

"The principal factors which govern formation of a drug habit are the nature of the individual who takes the drug and the pharmacologic action produced by that drug.

"The effect of a drug which may give rise to habit formation is pleasurable stimulation or escape from unpleasant experience, such as insomnia, fear, grief, pain, etc.

"Such effects are produced by the administration of drugs which have depressant or stimulant properties.

"Desire to obtain such effects is likely to cause frequently repeated use of such drug.

"Frequently repeated use of such drugs is likely to induce, and in certain persons does induce, psychic dependence and, in the case of some drugs, psychic and physical dependence, on such drugs.

"Psychic dependence on a drug is habituation to that drug, and psychic and physical dependence on a drug is addiction to that drug, so that addiction to a drug includes habituation to that drug. A drug which is likely to induce, and in certain persons does induce, habituation to such drug is a habit-forming drug, although repeated use of that drug may not necessarily induce addiction to that drug.

"The fundamental nucleus of a drug which possesses the habit-forming properites is in no way modified by the addition of the basic or acidic ion, so that the habit-forming properties of a drug are substantially the same whether it be a free base, or acid, or a salt formed by its combination with an acidic or basic ion. The principal differences between these forms are only in their physical properties, such as solubility, which may affect the mode of administration of the drug or its rate of absorption by the human body; but once absorbed their effects are identical.

"A chemical derivative is a substance so related to another substance by modification or partial substitution as to be regarded as theoretically derivable from it, even when not obtainable from it in practice."

Drugs included under these regulations are as follows:

From Barbituric Acid

Alurate, 5-allyl-5-isopropyl-barbituric acid.

Amytal, 5-ethyl-5-isoamyl-barbituric acid.

Barbital, 5, 5-diethyl-barbituric acid.

Butisol, 5-ethyl-5-sec-butyl-barbituric acid.

Cyclopal.

Cyclopen, 5-allyl-5-cyclopentenyl-barbituric acid.

Delvinal, 5-ethyl-5-(1-methyl-1-butenyl)-barbituric acid.

Dial, 5, 5-diallyl-barbituric acid.

Eldoral, 5-ethyl-5-(1-piperidyl)-barbituric acid.

Eunarcon, 5-(2-bromoallyl)-5-isopropyl-1-methyl-barbituric acid.

Evipal, 1, 5-dimethyl-5-(1-cyclohexenyl)-barbituric acid.

Ipral, 5-ethyl-5-isopropyl-barbituric acid.

Mebaral, 5-ethyl-5-phenyl-1-methyl-barbituric acid.

Narconumal, 5-allyl-5-isopropyl-1-methyl-barbituric acid.

Neonal, 5-ethyl-5-butyl-barbituric acid.

Nostal, 5-isopropyl-5-(2-bromoallyl)-barbituric acid.

Ortal, 5-ethyl-5-hexyl-barbituric acid.

Pentenal, 5-ethyl-5-cyclopentenyl-barbituric acid.

Pentobarbital, 5-ethyl-5-(1-methylbutyl)-barbituric acid.

Pentothal, 5-ethyl-5-(1-methylbutyl)-2-thio-barbituric acid.

Pernoston, 5-sec-butyl-5-(2-bromoallyl)-barbituric acid.

Phanodorn, 5-ethyl-5-(1-cyclohexenyl)-barbituric acid.

The Food and Drug Administration has finally drafted regulations which list those drugs which are derivatives of the drugs mentioned in the law. These are the products upon which the habit-forming warning statement is required.

Phenobarbital, 5-ethyl-5-phenyl-barbituric acid.
Proponal, 5, 5-dipropyl-barbituric acid.
Rectidon, 5-(2-Bromoallyl)-5-(1-methylbutyl)-barbituric acid.
Rutonal, 5-methyl-5-phenyl-barbituric acid.
Sandoptal, 5-allyl-5-isobutyl-barbituric acid.
Seconal, sodium 5-allyl-5-(1-methylbutyl) barbiturate.
Sigmodal, 5-amyl-5-(2-bromoallyl)-barbituric acid.
All lithium, sodium, potassium, magnesium, calcium, strontium, and ammonium salts of the foregoing chemical derivatives of barbituric acid.

From Bromal

Bromal Hydrate, tribromoacetaldehyde hydrate.
Brometone, 2-(tribromomethyl)-2-propanol.
Bromoform, tribromomethane.

From Cannabis

Extract of Cannabis.
Fluidextract of Cannabis.
Tincture of Cannabis.

From Carbromal

Acetylcarbromal, a-bromo-a-ethylbutyryl-acetyl-urea.
Bromural, a-bromoisovaleryl-urea.
Neuronal, a-bromo-a, a-diethyl-acetamide.
Sedormid, a-allylisovaleryl-urea.

From Chloral

Alpha-Chloralose, a-(B-trichloro-a-hydroxyethyl)- d - glucoside.
Chloralformamide, N-(B-trichloro-a-hydroxyethyl)-formamide.
Chloral Hydrate, trichloroacetaldehyde hydrate.
Chloralimide, trichloroethylideneimine.
Chlorobutanol, 2-(trichloromethyl)-2-propanol.

From Cocaine

All salts of cocaine obtained by combining cocaine with any acid.

From Codeine

Dicodid, dihydro-codeinone.
Eucodal, dihydrohydroxy-codeinone.
Eucodin, codeine methyl bromide.
All salts of the foregoing chemical derivatives of codeine, and all salts of codeine, obtained by combining any such derivative or codeine with any acid.

From Heroin

All salts of heroin obtained by combining heroin with any acid.

From Morphine

Dilaudid, dihydro-morphinone.
Ethylmorphine.
Paramorphan, dihydro-morphine.
Each of the following drugs is theoretically derivable or is actually derived from a parent substance specified in section 502 (d) of the Federal Food, Drug, and Cosmetic Act, as hereinafter indicated:
All salts of the foregoing chemical derivatives of morphine, and all salts of morphine, obtained by combining any such derivative or morphine with any acid.

From Opium

Extract of Opium.
Fluidextract of Opium.
Tincture of Opium.

From Paraldehyde

Metaldehyde.

From Sulphonmethane

Sulfonethylmethano 2, 2-diethylsulfonyl-butane.
Sulfondiethylmethane, 3, 3-diethylsulfonyl-pentane.
Each of the derivatives above has been investigated, and it has been found that each possesses depressant or stimulant properties, and that its frequently repeated use is likely to induce, and in certain persons does induce, psychic dependence on such derivative and in some cases physical dependence.

COLD CREAMS

By JOSEPH KALISH

Cold creams—consistent creams based upon beeswax, oil, water, and an alkali—are fundamental products in cosmetic technology and description of their properties, composition, and manufacture bears frequent repetition. Thus the action of beeswax and borax together illustrate emulsification principles and practices, and the addition of other components serve to show how the original properties of the cream may be modified to produce different types of preparations.

In a cosmetic sense, cold creams may serve as cleansing creams, so-called all-purpose creams, lubricating creams, foundation or make-up creams, etc. by the selection of suitable modifying substances.

As is known, cold creams were first named because of the cooling sensation they gave to the skin as a consequence of the evaporation of their water content. In official compendia they are often called rose water ointments, the floral water being used in place of ordinary or distilled water. Beeswax is the wax common to all products of this classical type and the quality, source, degree of refinement, etc. have important effects upon the properties of the finished cream. As yet, to our knowledge, no analytical factors have been discovered which determine the emulsifying power of the wax. Possibly the proportion of free wax alcohol present is more important than has been realized. At any rate, the acid number of official beeswax must lie between 18 and 24, and this determines the amount of alkali required for neutralization of the free acid in the wax. This neutralization produces a true soap, the alkali metal (or equivalent) salt of a long, straight chain, monocarboxylic acid. This, in combination with the free wax alcohol acting as an auxiliary emulsifier, and possibly the ester present in substantial quantity, makes a stable, thick emulsion with the oils and water added.

The alkali almost invariably used in combination with beeswax is borax and it should be added to the extent of about 5 to 7 per cent. of the total beeswax used. Smaller quantities will not fully neutralize the free fatty acids with the consequent inefficient use of emulsifying value. Larger amounts, because of the limited solubility of borax in water, may result in grittiness in the cream attributable to crystallization of the unused salt, and crystallization of liberated boric acid. A sodium soap is formed, yet the far cheaper sodium hydroxide is almost never utilized in place of borax. It must be realized that the liberated boric acid plays an important part as a buffer, preventing excess alkalinity that might otherwise result from hydrolysis of the sodium salt. Nevertheless, there is no technical reason why borax may not be replaced, if desired, by various organic alkaline substances such as the amino glycols, which are quite mild alkalies. Since one of the outstanding characteristics of a beeswax cream is its brilliant whiteness, it seems somewhat foolish to use those organic emulsifying substances that may cause discoloration, and these should be avoided. Creams using other alkalies in place of or supplemental to borax may differ quite widely in consistency and other characteristics, and adjustments in the formulation will often be necessary.

Alakli metal soaps, or their equivalents, tend to give oil-in-water emulsions in the presence of sufficient water. Nevertheless, if the quantity of water present in the emulsion is too low, the emulsion will be of the reverse type, namely water-in-oil. Although creams of this emulsion types have real cosmetic virtues, they should be avoided in cold cream formulation. Inverted beeswax emulsions are very likely to be relatively dull in luster and somewhat unstable; inversion may also be caused, at least in part, by the presence of small amounts of calcium salts in improperly purified borax (or in hard water).

Water, if sufficiently pure, affects the emulsion primarily on the basis of the amount present. If the proportion of water is low, 20 per cent. or less, the cream is quite likely to be dull and salve-like in character. From 30 to 40 per cent. has been found to be the optimum amount, keeping the cream definitely in the oil-in-water category without making too soft a product. Purity of the water, as has already been indicated, may have an important effect upon the quality of the finished cream. The presence of iron or organic materials may lead to discoloration; calcium and magnesium salts found in hard water may create instability because of incipient inversion.

The final primary component of cold creams is oil, making up the balance after about 20 per cent. of total waxes and fats and 30 to 40 per cent. of water. Almond oil has long been specified in official works. If it, or other vegetable oils, are the only ones present, the cream is quite likely to be sticky, greasy, and of poor luster. At least half of the oil should be a good quality of light viscosity mineral oil which permits the cream to spread smoothly with minimum drag. The most popular viscosity seems to be the 65/75 grade. If a very large proportion of the oil present is mineral oil of this low viscosity, the cream will be found to have very fine skin cleansing properties. In common with other preparations not containing emollients, cold creams based solely upon beeswax, borax, mineral oil and water will be somewhat drying to certain skins; the addition of emollients, including vegetable oils, is very useful in overcoming this disadvantage.

A cream formulated along the bare outlines given above, for example, containing 15 parts of beeswax, one part of borax, 39 parts of water, and 45 parts of mineral oil, will give a smooth, shining white cream that rubs out fairly well on the skin. However, a harder product, one using less beeswax, or one with different spreading characteristics may be desired. This can be accomplished by use of waxes such as paraffin or ceresin. Ceresin, in the proportion of 2 to 5 per cent., gives a definitely harder cream, with the other general characteristics of the original. Paraffin, on the other hand, also hardens the cream, but confers the property of quick melting. Thus, a mixture using 10 parts of beeswax, 10 parts of paraffin, 35 parts of water, 0.8 parts of borax, and mineral oil to make 100 parts, will be smooth, white, and shining. In addition, it will quickly melt on the skin to give a practically transparent oily film quite different in appearance and spreading characteristics from that given by creams containing only beeswax or beeswax and ceresin.

Petrolatum is often added to increase the body of the cold cream and is also useful in increasing stability if a high proportion of oil is used. Too much must be avoided or else the oil film may be sticky and exhibit too much drag. A recently produced low melting amorphous wax, actually a petrolatum from which liquid components have been removed, has many of the advantages and few of the disadvantages of petrolatum, since it will increase body and reduce oil seepage without adding stickiness.

Spermaceti has long been peculiar to cold cream formulas in which it acts as a valuable emollient. It serves to make the cream even whiter and more opaque. Cocoa butter is a very valuable skin softener, but it must be limited to 1 to 2 per cent. of the formula or else the smooth texture of the cream will be adversely affected. A small amount of cetyl alcohol, on the order of one per cent., may also act as an emollient, and will also serve to supplenent the natural free wax alcohol of the beeswax as an auxiliary emulsifier and stabilizer. Too much, however, will soften the cream considerably and may make it less opaque.

One of the great, outstanding virtues of cold creams, accounting to a large extent for its popularity with manufacturers, is the ease with which it can be manufactured. With reasonable precautions as to quality of raw materials, thoroughness of stirring, and adequate temperature control, a good product will almost certainly result. Waxes and oily components are melted together in one kettle and then poured into another kettle containing the borax dissolved in the water kept at the same temperature as the melted wax mixture. Stir thoroughly until a homogeneous liquid emulsion results and then stir more slowly until the temperature drops to about 40° C. (104° F.) Pour into jars at this temperature, set aside until set, and cap. The temperature of the melted wax mixture is best kept below 75° C. (167° F.) to avoid discoloration of heat-sensitive ingredients. In making the wax melt, in fact, it is best to add the oil to the kettle first, heat it to the desired temperature, and then add the waxes and other solid ingredients which are thus disintegrated by a combination of melting and solution. There seems to be no special advantage in adding the oils to the water, for emulsification, or vice versa. Although completely satisfactory emulsions are made without the use of a colloid mill, this type of equipment, if constructed so as not to beat air into the cream, will give very smooth, stable products.

THE NEW N.F.

NINETY-SIX drugs and preparations have been added to N.F. VII, to be published this month. Of this number, 71 are articles that were official in U.S.P. XI but which were dropped from the forthcoming U.S.P. XII. The N.F. Committee bases its decision on the admission of items dropped by the U.S.P. on the extent of use of the preparations and 15 items deleted from U.S.P. XI were not admitted to N.F. VII.

Forty-three items, official in N.F. VI were not admitted to N.F. VII; 32 of them because they were admitted to U.S.P. XII and the N.F. does not wish to publish duplicate standards, and 11 because they no longer enjoy an extent of use which would justify retaining them in the N.F.

A detailed breakdown of N.F. VII additions and deletions is as follows:

New Articles Admitted

Ammoniacal Solution of Silver Nitrate (widely used in dentistry).

Cherry Juice (ingredient of Syrup of Cherry).

Chloroformic Solution of Coal Tar (superior preparation for coal tar application).

Compound Elixir of Benzaldehyde (for flavoring agent replacing Compound Elixir of Bitter Almond).

Compound Syrup of White Pine with Codeine (replaces Compound Syrup of White Pine with Morphine).

Magma of Bentonite (5 per cent. aqueous suspension of Bentonite for extemporaneous use).

Merbromin, Solution of Merbromin, Surgical Solution of Merbromin (preparations of disodium salt of 2,7-dibrom-4-hydroxymercurifluorescein, originally introduced by Hynson, Westcott and Dunning under the proprietary name "Mercurochrome.")

Methyl Parahydroxybenzoate (preservative for external preparations).

Neocalamine, Neocalamine Lotion, Neocalamine Ointment, Neocalamine Phenolated Lotion (new form of calamine which more nearly approximates flesh color, contain Bentonite as a suspending agent).

Pectin, Pectin Paste, Thin Pectin Paste, (developed by Dr. Bernard Fantus for indolent ulcers, bed sores, etc.)

Phenothiazine, (new veterinary anthelmintic).

Raspberry Juice, (ingredient of Syrup of Raspberry).

Red Ferric Oxide, (used in preparation of Neocalamine).

Resorcinol Brown, Solution of Resorcinol Brown, (color for pharmaceutical preparations, particularly Solution of Cinchona Alkaloids).

Spirit of Benzaldehyde (flavoring agent in place of Spirit of Bitter Almond).

Yellow Ferric Oxide (used in preparation of Neocalamine).

Zinc Eugenol Cement (widely used in dentistry).

Articles Dropped by U.S.P. XII and Admitted to N.F. VII

Acetum Scillae
Acidum Aceticum Dilutum
Aconitum
Acriflavina
Acriflavinae Hydrochloridum
Aethylhydrocupreinae Hydrochloridum
Ammonii Bromidum
Ammonii Salicylas
Arseni Triiodidum
Asafoetida
Bismuthi Subgallas
Calcii Creosotas
Cantharis
Capsicum
Carbromalum
Ceratum Cantharidis
Cinchona
Copaiba
Creosoti Carbonas
Creosotum
Dichloramina-T
Elixir Glycyrrhizae
Emplastrum Cantharidis
Extractum Nucis Vomicae
Ferrum
Fluidextractum Belladonnae Radicis
Guaiacol
Hydrargyri Iodidum Flavum
Iodoform
Kino
Liquor Ammonii Acetatis
Liquor Ferri Chloridi
Liquor Ferri Tersulfatis
Liquor Sodii Hypochloritis Dilutus
Massa Hydrargyri
Mistura Opii et Glycyrrhizae Composita
Oleum Santali
Paraffinum
Paraffinum Chlorinatum
Pepsinum
Pilulae Aloes
Podophyllum
Potassii Chloras
Pulvis Ipecacuanhae et Opii

(*Continued on page 642*)

BROMIDES

By M. A. LESSER

Since they were introduced into medicine back in 1840, the simple bromide salts have become one of the most important groups of drugs in the medical armamentarium. Under the present conditions of stress, leading to an increase in functional nervous ailments, these drugs will undoubtedly become even more important. Their uses, restrictions and possible dangers are, therefore, of prime importance.

During recent years, however, much has been written that appears to disparage these valuable drugs, until, in some instances, one might get the impression that the bromides ought to be relegated to the therapeutic limbo. Yet, it is very much to be doubted that even those who most severely criticize these agents would care to see their discontinuance, even though they might favor greater restrictions.

Undoubtedly, the truest picture of the value of a drug or group of drugs is given by the frequency with which they are prescribed by physicians. On this basis, the bromides rank very high, a fact attested by prescription surveys made during the last two decades, both in this country and abroad. For example, an investigation of the prescriptions issued during 1928 under the national health insurance plan in England, showed that about one of every ten prescriptions contained bromides as the principal ingredient. Potassium bromide, ammonium bromide and sodium bromide were the salts most commonly prescribed.[1]

In 1932, the U. S. Department of Commerce reported the results of the prescription survey made in St. Louis.[2] Here, sodium bromide occupied fifth place in the listing of prescription chemicals listed according to their frequency of use. Similar studies by Preu and his associates[3] in 1936 showed that bromide was the chief ingredient in one of every seven prescriptions for internal use; the potassium salt being most frequently used. A prescription ingredient survey made three years later in Lafayette, Indiana by research workers of the Purdue University School of Pharmacy gave sodium bromide fifth place in a list of 689 official, non-official and proprietary items, ranked according to their frequency of use.[4] Andrews'[5] 1940 survey, based upon a study of samplings from representative drug stores in several states, showed sodium bromide in sixth place among prescription ingredients.

Indicated chiefly as sedatives and anticonvulsants, the very frequent use of the bromides, as shown by these surveys, points to the wide usefulness of these drugs in a large variety of conditions. According to a recent review,[6] the bromides are described as having a beneficial effect on insomnia, epilepsy, neurotic and neurasthenic conditions, sexual disturbances, climacteric conditions, hyperemesis, stomach pain of nervous origin, hysteria, pertussis, chorea and in various other conditions where sedative or hypnotic medication is required. Bromides have also been useful in the withdrawal of alcohol.

Although others had previously known and lectured on the sedative effects of bromides, Behrend's[7] paper, in 1864, is generally credited as being the first published report on their action in inducing sleep. Frankly stating his indebtedness to Brown-Sequard and others for his information concerning its action, Behrend gave a detailed description of two cases in which potassium bromide had been used to relieve symptoms of insomnia due to worry.

His cases were as typical as any described in modern medicine for which bromides are prescribed. Today these drugs are widely used as sedatives in the therapy of a variety of nervous ailments. As Goodman[8] recently put it, "In anxiety tension states, hypertension, cardiac neuroses, chronic insomnia and similar states requiring mild, long continued sedation, the bromides are helpful for the decrease in reflex excitability of the nervous system which they produce."

Indicative of the role that the bromides will be called upon to play during these crucial days are the reports of their application in England. Pilkington,[9] for example, found that bromides, when promptly administered, were extremely effective in treating a large number of patients for anxiety and restlessness during air raids. He emphasized, however, that there is a wide

variation in the dosage required to produce the greatest therapeutic effect, and stressed the need for individualization and precautionary measures.

In a memorandum for the medical profession concerning neuroses in war, published in the *British Medical Journal*,[10] instructions were given for treating individuals exhibiting nervous symptoms due to fear, anxiety and other mental effects during and after air raids. "In patients who are simply frightened and in emotional cases," advised a cited memorandum from the Ministry of Health, "reassurance combined with an appeal to personal and patriotic pride and a large dose of bromide will usually be sufficient. The patients should then be sent to their homes."

One of the most important indications for the use of the bromides—one considered by Sollmann[11] as the principal employment for these drugs—is in the treatment of epilepsy. Locock, although he probably never wrote a paper on the subject, is generally credited as having first described the value of bromides in mitigating epileptic attacks. At a medical meeting in 1857, with Locock presiding, Sieveking[12] presented a study of a number of cases of epilepsy. In the discussion that followed the reading of this paper, Locock mentioned that he had successfully used potassium bromide for treating epileptic attacks occurring during the menstrual period.

Within a few years, bromide therapy had superceded the numerous other methods employed in the therapy of epilepsy. Moreover, these drugs have maintained a leading place in the treatment of this perplexing disease, and authorities in this field class the bromides as the most effective of the anticonvulsant drugs.[13, 14] "In epilepsy," wrote Goodman,[8] "the bromides have been employed successfully for over eighty-five years. Despite the more recent employment of phenobarbital, dilantin and the ketogenic diet, the bromides still provide a mainstay for the symptomatic relief of this syndrome."

In former days, much was written concerning the alleged mental and physical deterioration following the continued use of large doses of bromide, sometimes needed in the treatment of epilepsy. The work of Paskind[15] has done much to dispel this viewpoint and it is now generally conceded that, "The taking of bromides is not likely to result in deterioration."[16]

The bromides are also employed to prevent and relieve convulsions in eclampsia and strychnine poisoning and to relieve the muscular twitchings of chorea or "St. Vitus' Dance"[17]. Sollmann[11] mentions that the action of bromide is utilized in hysterical conditions, Basedow's disease (exophthalmic goiter), in the nervous vomiting of seasickness and pregnancy, to prevent cinchonism, for incontinence of urine, as an anaphrodisiac in sexual hyperesthesia, and against delirium tremens.

Biochemical studies made during recent years have proven that the bromide ion is a normal physiological constituent, and that it is present in minute but readily measurable quantities in almost all organs and in the blood.[18, 19, 20] Gatto[21] found bromine in the blood of infants immediately after birth, indicating placental origin; bromine also being present in milk, whether from the mother or from artificial feeding. The careful studies of Neufeld[22] also showed that the ion is present in practically all foods, whether of vegetable or animal origin.

The physiological function of this normal bromide is not known as yet. The experimental studies of rats made by Winnek and Smith[23] indicate that bromine is not essential in nutrition, at least not for this laboratory animal.

When the bromide salts are administered in therapeutically effective quantities, their action is restricted almost entirely to the central nervous system. With a few minor exceptions, other tissues and organs of the body respond to the bromide ion as they do to the chloride ion. It has been found that muscle and nerve tissue live almost as long in sodium bromide solutions as in those of chloride solutions of equivalent concentration. The heart may be perfused for many hours with saline solutions in which the chloride has been substituted by bromide and be only slightly affected.[24]

Therefore, the sole therapeutic action of the bromides is their sedative effect on the central nervous system. Other actions of these drugs on the body are considered negligible.[8] However, analgesia is not considered a part of the bromide effect and the drugs are of no value against pain. Sollmann, like others, has remarked that bromides do not enforce sleep, but rather act by permitting sleep through the elimination of excessive worry, restlessness and the like, and are efficient in quieting pathologic excitability.

However, the mechanism by which the bromides produce their sedative effects has not yet been clarified. According to an item in the *Journal of the American Medical Association*,[25] the bromide effect is explained as follows: "Its mode of action may be visualized by assuming that it goes into "partnership" with chloride and acts chiefly by rendering the tissue fluid less suitable for optimal function of the tissues: the central nervous system, the most reactive in the body, chiefly showing the result in the way of a depression. Maximum effects result when there is bromide saturation of the system, i.e., when as much bromide is eliminated as is ingested."

The item goes on to say that, "Fatal poisoning by means of bromide is rare and not likely to occur in a normal individual." This point is quite significant since it constitutes one of the most outstanding characteristics of the simple bromide salts, and most pharmacologists comment on this fact. For example, in the review cited above,[6] it was pointed out how noteworthy it is that fatalities due to bromide intoxications are great rarities, even when the blood bromide concentration is very high.

Several reasons have been advanced to explain this freedom from acute toxic effects. Very recently, in their new test on pharmacology, Goodman and Gilman[26] expressed the opinion that, "Acute bromide intoxication is rare because amounts of the drug sufficiently large to elevate the serum bromide to a toxic level can hardly be ingested and retained without vomiting. Acute fatalities in man are thus unknown."

While the bromides are outstanding among modern sedatives from the standpoint of freedom from fatal effects, their misuse can and sometimes does lead to bromide intoxication or "bromism." Although bromism is a definite problem, one or more of several factors are necessary to produce bromide intoxication. According to Kamman,[27] these are: the administration of moderately large doses of bromide; decreased chloride intake; low delirium threshold; heightened individual susceptibility; impaired elimination; or the presence of another toxic factor such as alcohol or infection. Consideration should also be given to the indiscriminate use of bromides by individuals who are not familiar with the possible dangers of excessive use.

The symptoms of bromide intoxication are varied, but in general the condition is characterized by psychic depression, sluggish movements and slow gait, loss of appetite, constipation, coated tongue, feted breath, and drowsiness. The acne which is sometimes seen to accompany bromism has been greatly overemphasized, according to Gundry,[28] who found that the acne lesions were in no way proportionate to the severity of the bromism. Such eruptions are often considered to be a form of allergic manifestation.[29]

However, treatment of bromide intoxication is not difficult; recovery time ranges from one to six weeks, depending on the severity of the intoxication. Cessation of bromide medication is, of course, the first step in the treatment of bromism. Since chloride replaces bromide in the body and promotes its elimination by the kidneys, sodium chloride is considered a specific in the curative treatment of this condition, the salt being best administered in capsules. A high fluid intake is also valuable.[28]

Because the incidence of bromide intoxication appears to be increasing, their use has been severely criticized by some physicians. Others, including many who have made a study of bromide intoxication, have defended their use. Kamman,[27] for example, expressed the opinion that "the salts of bromide are too valuable as therapeutic agents for us to deny their use and it would be no more logical merely on account of a few cases of bromide poisoning to condemn them as a whole than it would be to condemn digitalis because of the occasional occurrence of digitalis poisoning."

Back in 1933, Wainwright,[30] even though reporting on five cases of bromide intoxication, concluded that these untoward effects make bromides no less valuable as therapeutic agents, but do stress their intelligent use, without which the manifestations of intoxication appear.

Solis-Cohen and Githens,[31] in their standard reference text, expressed the opinion that the earlier studies on bromide toxicity were largely vitiated by the fact that these investigations were made with potassium bromide. They point out that when this bromide is given hypodermically, the effect of the bromide ion is entirely overcome by the action of the potassium base and that even when this salt is given by mouth, the potassium effect is sufficient to disturb the results.

Much more recently, in a review of bromide intoxication, Moore, Sohler, and Alexander,[6] of the Department of Neurology, Harvard Medical School, pointed out that, "The side actions, if there are any, have been described so infrequently in comparison with other sedatives that to eliminate bromides from neuropsychiatric therapy would be absurd unless all potentially toxic sedatives were eliminated as well. There are so many of these that elimination would mean the end of sedative and antineurologic therapy."

Other authorities[32] have remarked that the importance and frequency of bromide intoxication have probably been exaggerated and not sufficiently differentiated from other psychotic conditions. Of course, all of these views are intended for the physician who prescribes bromides. The indiscriminate use of bromides by the general public is quite another matter, however, and here the necessary restrictions have been set forth by the Food and Drug Administration. "It is our opinion," says an official statement from this bureau, "that preparations containing bromides should not be sold without prescription if the dosage provided involves the consumption of more than 30 grains per day or more than 15 grains during any 3-hour period."[33]

The safety element in bromide usage can be heightened, not only by regulation of dosage, and careful observations for untoward effects, but also by the use of simple tests, such as the Wuth test,[34] which permit physicians to easily determine blood bromide levels. Such tests enable doctors to readily regulate and control bromide dosage so that the blood concentration will not rise above toxic levels. Such simple determinations are an invaluable aid in differentiating possible bromide intoxication from various neuropsychiatric conditions, which, frequently resembling the bromide symptoms, may complicate the diagnosis.

Even so, extensive research and clinical studies have proven that each patient receiving bromide medication is an individual problem. Boshes,[35] who has done much work in this field, particularly on the use of bromides in epilepsy, points out that there is no correlation between the amount of bromide taken by mouth and the blood bromide level. Nor is there a parallel between this blood level and the amount of nervous depression. In other words, one epileptic patient on a low bromide intake might develop a low blood bromide level and remain free of attacks, while another patient on the same dosage could attain a higher blood level without getting any relief from his seizures.

Other factors enter the picture. Epileptics appear to possess a greater tolerance to these drugs than do other

patients. In further instances, a special idiosyncracy to the drug seems to exist.[6]

All this helps to explain why there has been no full agreement as to what constitutes safe upper blood bromide level. In general, a concentration of over 150 mg. bromide per 100 cc. of blood is considered dangerous. With epileptic patients, however, higher blood bromide values are often necessary to prevent convulsive attacks. Novick,[13] for example, found that optimum anticonvulsive effects are obtained when the blood bromide level is between 225 to 275 mg. per cent. From the clinic for epilepsy in the Northwestern University Medical School, Arieff[14] reported that the average effective blood bromide level was about 200 mg. per 100 cc. of blood. At this level, very few toxic cases were seen.

Pertinent to this question of blood bromide concentrations is a recent investigation made by Flinn[36] on a series of seventy adults, representing a typical cross-section of the population. Divided into two groups, one received a total of 30 grains of sodium bromide daily, while the other was given a total daily bromide dosage of 45 grains. The bromides were taken each day, seven days per week, for four months and then stopped. A study of the data obtained showed that the ingestion of from 30 to 45 grains of sodium bromide daily over a four-month period not only does not result in a high blood bromide (which falls rapidly after cessation of medication), but that such dosage does not affect the nervous reactions.

Sodium bromide, potassium bromide and ammonium bromide are the individual bromide salts most frequently used. Though official, calcium bromide U.S.P. XI, lithium bromide and strontium bromide (both N.F. VI), are but little used in therapy. However, a check of 1939 and 1940 prescription surveys, previously cited, [4, 5] clearly indicates that many physicians prefer to prescribe bromides in combination, e.g. triple bromides, elixir of five bromides. In some instances, such bromide combinations, both official and proprietary, exceed potassium bromide and particularly ammonium bromide in frequency of prescription use.

It is known that sometimes a mixture of two or more bromides appears to act better than when either one is used alone.[31] Whether this is due to a synergistic action, which results in a joint effect more powerful than when an equal dose of any single ingredient is given, is a most interesting problem in pharmacology. Sollmann[11] has observed that, "The long continued administration, for epilepsy, of large doses of a single bromide would be expected to disturb the cation balance of the body, and a mixture of bromides, such as the "Erlenmeyer Mixture" (KBr:NaBr-NH_4Br::1:2:1) might have advantages." There is no proof, however, that this particular ratio is well balanced. He feels that the subject deserves investigation.

Of course, the bromide salts are very frequently used in conjunction with other drugs outside the bromide group. Typical official examples include Compound Elixir of Chloral and Potassium Bromide N.F. VI, and Effervescent Potassium Bromide with Caffeine N.F. VI. Proprietary preparations containing bromides are familiar pharmaceutical items.

Organic bromide derivatives are not part of this discussion and cannot be considered here. However, information on these drugs is readily available.[37, 38]

For many decades, the bromide salts have proven themselves to be valuable sedatives and anticonvulsants. Like other valuable drugs, they have their indications, dangers and limitations. Application of this knowledge will maintain the value of these salts as therapeutic agents, and while perhaps never curing, help them to mitigate illness, both mental and physical.

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CUTTER

Sprout Waldron Co., Muncy, Penn., have developed a new knife cutter which originally was designed for cutting scrap material such as scrap rubber, paper, etc. This machine is extremely ruggedly built. Its design is very much like the conventional cutter, excepting that it is very narrow. It is equipped with three stationary knives and five flying knives mounted on a solidly cast rotor. It is built entirely of steel. It would be an excellent machine for cutting materials like hemlock bark, white pine bark, and long roots.

ANTACID CLAIMS

In a recent issue we published a memorandum which presented the views of the medical advisor to the Federal Trade Commission on the subject of antacids and the way they work. This memorandum naturally gave the answer to the claims that the FTC thought proper to be made in the advertising of antacids. Since that time there has been a change in the office of medical advisor to the FTC, this office now being held by Dr. James J. Durrett. It was previously thought that Dr. Durrett concurred in the opinion drawn up by his predecessor. However, a new memorandum expressing a somewhat different opinion is now available. It is interesting to note that this new opinion contradicts the statements contained in Dr. Alvarez's book, "An Introduction to Gastro-enterology," and also contradicts interpretations which have been placed upon the results of many clinicians and much research work. The new opinion follows:

"In certain parts of the stomach of individuals regarded as normal there is found a peculiar type of cell which produces hydrochloric acid. The maximum concentration of the acid which these cells can produce is about 0.4 per cent. There is no mechanism in the stomach by which this acid, once it is formed, may be concentrated. All of the processes in the stomach are dilution processes. There are a number of persons who for some reason do not have free hydrochloric acid in their gastric juice. Between the ages of 20 and 30 in men this number is smallest. It is somewhat higher for women. As age advances there is a gradual increase until about one of every four who reach the age of 50 no longer have in their gastric juice free hydrochloric acid. It is a well established fact that fewer people have symptoms attributable to their stomach between the ages of 20 and 30 than at nearly any other age period of life. Certainly as age advances the percentage of those who have such symptoms markedly increase.

"From these general observations it is apparent that the age group most certain to have a maximum of free hydrochloric acid in their stomach is not the age group who is to be expected to have the most symptoms attributable to the stomach. From this and other observations which involve the analysis of large numbers of specimens of gastric juice it has been determined to be improper to attribute all ordinary manifestations of stomach distress and discomfort to acid as its cause. In effect, that is what the advertising of most alkali mixtures such as . . . . does and it is misleading because the individual sufferer cannot determine the condition of his stomach with respect to its acid content.

"Alkali mixtures taken into the stomach will react with any free acid which may be present and the neutralizing effect may be partial or complete, depending upon a number of complex factors met with in the stomach. It is improper to say that these alkalies will neutralize 'excess acidity' irrespective of dose or the conditions under which they are taken. Soluble alkalies which are taken into the stomach in water or other fluids will exert an influence on the mucin which lines the stomach tending to remove it. This mucin is undoubtedly of much value in the proper functioning of the stomach and its reduction or removal may be harmful. These alkalies, through neutralizing the hydrochloric acid, may seriously interfere with normal digestion because alkalies remove in part the acid which ordinarily unites with certain elements of the food as a preliminary step in digestion. Also by reducing the acid in the stomach the pepsin is rendered ineffective or much reduced in its digestive effectiveness. Repetitious taking of alkalies in considerable doses may tend to produce a state of alkalosis.

"The 'stomach distress' which is frequently met with in persons who are hungry, who have eaten too much, who have drunk too much, or improperly, or who have some pathological condition of the stomach, should not indiscriminately seek relief through the taking of alkalies because relief cannot, in a great many instances, be acquired in this way. Damage may be done.

"The causes of stomach distress are so varied and numerous that it is impossible in a memorandum of reasonable length to deal adequately with this problem. Suffice it to say here that alkalies are not the proper treatment to offer to all persons who have such discomfort and distress irrespective of the origin of these symptoms. This Division feels that it is a material fact which an advertiser might readily be required to give to his prospective customers that hyperacidity is not the most frequent cause of stomach distress, that they are not to be expected to get even temporary relief from the taking of alkalies in many such conditions, and that injury or interference with body functions may be interfered with by taking alkalies. (may result?)

"No objection is offered to representations that . . . . properly taken will temporarily relieve heartburn and sour stomach. It will not relieve all cases of flatulence, gas cramps or nausea. It will not even relieve a substantial percentage of such symptoms. An acid stomach is a normal stomach and to neutralize the acid in the stomach with . . . . or any other alkali is to produce an abnormal stomach.

"The proposed advertising with respect to colds and over-indulgence is false.

"The mechanism of relaxing the pylorus of the stomach as well as relaxing the general musculature of the stomach and at the same time promoting emptying of the stomach which is accomplished by contraction of the musculature of the stomach, is inconsistent and in part incorrect and is, in any event, sufficiently complex that any discussion of it in the advertising of . . . . or any other simple alkali cannot fail to mislead. . . . . cannot when taken as directed control these complicated motor functions of the stomach."

The New N. F.

(Continued from page 636)

Pulvis Sennae Compositus
Pyrogallol
Quinina
Resina Podophyli
Santonium
Scillae
Serpentaria
Sodii Acetas
Spiritus Aethylis Nitritis
Spiritus Benzaldehydi
Spiritus Chloroformi
Strychninae Nitras
Sulfonethylmethanum
Sulfur Lotum
Syrupus Ferri Iodidi
Syrupus Scillae
Theobromina cum Sodii Salicylate
Tinctura Aconiti
Tinctura Cantharidis
Tinctura Capsici
Tinctura Cinchonae Composita
Tinctura Ferri Chloridi
Tinctura Kino
Tinctura Scillae
Tinctura Valerianae
Tinctura Veratri Viridis
Valeriana
Veratrum Viride

Articles Official in N.F. VI but Admitted to U.S.P. XII and therefore Not Admitted to N.F. VII

Aethylis Carbamas
Amaranthum
Ampullae Bismuthi Subsalicylatis
Ampullae Caffeinae cum Sodii Benzoate
Ampullae Calcii Gluconatis
Ampullae Dextrosi
Ampullae Emetinae Hydrochloridi
Ampullae Epinephrinae Hydrochloridi
Ampullae Hydrargyri Salicylatis
Ampullae Pituitarii Posterioris
Ampullae Quininae Hydrochloridi et Aethylis Carbamatis
Ampullae Sodii Chloridi
Ampullae Sodii Citratis
Calcii Phosphas Praecipitatus
Elixir Phenobarbitali
Liquor Amaranthi
Liquor Dextrosi et Sodii Chloridi Isotonicus
Methylrosanilinum
Potassii Chloridum
Quininae Hydrochloridum
Tabellae Acetophenetidini
Tabellae Acidi Acetylsalicylici
Tabellae Atropinae Sulfatis
Tabellae Barbitali
Tabellae Barbitali Solubilis
Tabellae Codeinae Phosphatis
Tabellae Morphinae Sulfatis
Tabellae Phenobarbitali
Tabellae Sodii Nitritis
Tabellae Sodii Salicylatis
Tabellae Strychninae Sulfatis
Tetrachloroethylenum

Articles Official in N.F. VI but Not Admitted to N.F. VII

Cascara Amarga
Curatio Paraffini
Elixir Amygdalae Compositum
Elixir Aquosum
Elixir Chloralis et Potassii Bromidi Compositum
Fluidextractum Trifolii Compositum
Prunus Cerasus
Rubus Idaeus
Spiritus Amygdalae Amarae
Syrupus Glycyrrhizae
Syrupus Trifolii Compositus

F. D. A. OPINIONS

"The statement is noted in the text of this application 'The ingredients comprising the formula * * * are tested for identity and quality in the Control Department before being used in manufacture.' Under section 505(b)(4) of the Act you should provide this Administration with detailed information regarding the exact methods of testing the raw materials entering into this preparation for identity and quality. The statement is also noted that after the manufacturing processes have been completed samples of the batch are taken by the Control Department and the 'product is examined from the standpoint of identity * * *'. You should also provide this Administration with information regarding the methods of analyses or assay whereby you examine the finished material for identity. * * * The proposed label submitted with this application bears the statement 'Physicians should familiarize themselves with indications, dose and precautions which will be furnished upon request.' However, you have not submitted as a part of this application the descriptive literature which you contemplate distributing to physicians upon request. Five copies of this printed material should be submitted as a part of this application in order that the Administrator may intelligently evaluate the safety of this preparation. Final consideration of your application under section 505(b)(1) of the Act can obviously not be completed until such time as this descriptive literature has been submitted."

Britain's War Formulary

(*Continued from page 631*)

mended substitutes being preparations of magnesium trisilicate, kaolin and magnesium carbonate), gentian (it is suggested that quassia can replace this bitter), compound lobelia and compound stramonium powders.

"Since the shortage of glycerin and magnesium salts became acute we have had repeated requests for an alternative preparation for magnesium sulphate paste. One is provided by the War Formulary and it consists of a simple solution of sodium sulphate, 25 per cent. in water. The use of hypertonic solutions of this salt has recently been strongly recommended in the treatment of war wounds; it is said that septic oedema disappears rapidly, and granulation is stimulated. An interesting change has been made in the formula for Liquor Antisepticus, which now contains

Chloroxylenol	50 gm.
Terpineol	100 mils
Industrial methylated spirit	120 mils
Ricinoleic acid	50 gm.
Solution of sod. hydroxide B. P.	sufficient quantity
Solution of phenolphthalein B. P.	0.5 mil
Water	to 1000 mils

"Chloroxylenol is, of course, *p*-chloro-*m*-xylenol, the anologue of chlorocresol of the Third Addendum to the B.P., but the solution differs from that of the N.F. by a reduction in the quantity of alcohol, the substitution of sodium hydroxide for triethanolamine (now in short supply), and of terpineol for ti-tree oil. The phenolphthalein is included as a guide for the formation of a neutral solution which, it is suggested, can be prescribed in place of lysol. It is a little difficult to understand the reason for the addition of solution of phenolphthalein to the antiseptic instead of specifying its use as an external indicator as laid down in the Pharmacopoeia for other galenicals. Presumably standards for chloroxylenol and ricinoleic acid will be provided by the Codex, for at the moment none is available.

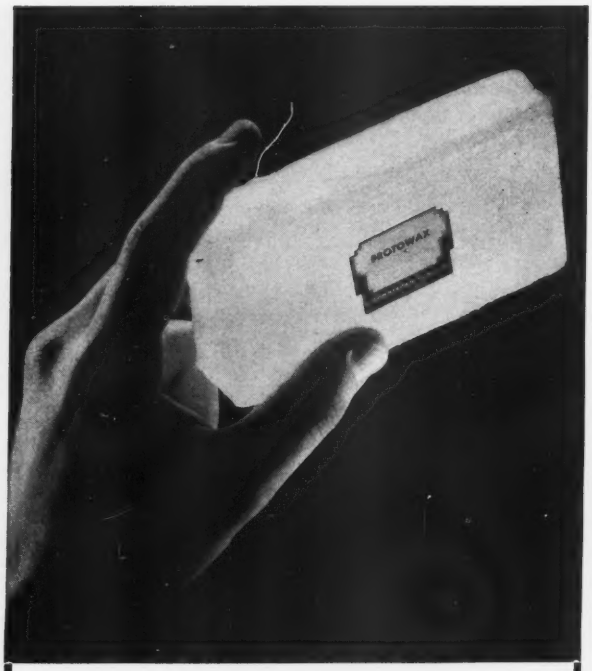
"Notice has, of course, been taken of the recent Order restricting to 25 per cent. the proportion of liquid paraffin in all emulsions and no formula for a paraffin emulsion including agar has been reproduced. The high price which now has to be paid for tragacanth has obviously been considered by the Committee, who make the suggestion that 44 grains of tragacanth, the quantity included in 8 fluid ounces of liquid paraffin emulsion, can be replaced by 4 fluid ounces of a 3 per cent. w/o solution of sodium alignate, which is supplied only under the trade name manucol.

Drugs and Preparations Included in the National Formulary but Omitted from the National War Formulary

Acet. Ipecac.
Acet. Scill.
Acid. Hydrobrom. Dil.
Acid. Hydrocyan. Dil.
Acid. Oleic.
Acid. Phosph. Dil.
Acid. Sulph. Aromat.
Acriflavin.
Adeps Benz.
Ammon. Brom.
Argent. Protein. Mit.
Bals. Tolu
Benzamin.
Benzamin. Hyd.
Bismuth. Carb.
Caffein.
Caffein. Cit.
Calx Chlorinat.
Chloralformamid.
Ext. Casc. Sagr. Sicc.
Ext. Cinchon. Liq.
Ext. Colch. Sicc.
Ext. Coloc.
Ext. Euphorb. Liq.
Ext. Glycyrrh. Liq.
Ext. Grindel. Liq.
Ext. Hyoscyam. Sicc.
Ext. Nuc. Vom. Sicc.
Ext. Seneg. Liq.
Ferri Sulph. Exsicc.
Glyc. Acid. Boric.
Glyc. Pepsin.
Glyc. Phenol.
Hydrarg. Subchlor.
Inf. Aurant. Conc.
Inf. Buchu Conc.
Inf. Calumb. Conc.
Inf. Gent. Co. Conc.
Inf. Quass. Conc.
Inf. Rhei Conc.
Inf. Rosae Acid. (ex. Conc.)
Inf. Val. Conc.
Ipecac. Pulv.
Jalap. Resin.
Lin. Aconit. Meth.
Lin. Bellad. Meth.
Liq. Ammon. Cit. Fort.
Liq. Bis. et Am. Cit.
Liq. Glyc. Trinit.
Liq. Iod. Mit.
Liq. Morph. Hyd.
Liq. Pot. Hydrox.
Mag. Sulph.
Mag. Sulph. Exsicc.
Mist. Bism. Co. Acid. c. Pepsin.
Oleoresin Capsici
Ol. Abietis
Ol. Cadinum
Ol. Camph. Rect.
Ol. Olivae
Ol. Thymi
Oxymel Scill.
Phenacetin
Phenazon.
Pil. Col. et Hyos. (Mass)
Pil. Ferri Carb. (Mass)
Pil. Hydrarg. (Mass)
Podoph. Resin.
Pot. Bicarb.
Pot. Brom.
Pot. Cit.
Pot. Iod.
Pot. Nitras
Pulv. Trag. Co.
Quin. Sulph.
Sod. Phenolsulph.
Spt. Ætheris.
Spt. Chlorof.
Spt. Juniper.
Sulph. Sublim.
Syr. Aurant.
Syr. Glucosi
Syr. Scill.
Syr. Tolu
Syr. Zingib.
Tinct. Aconit.
Tinct. Bellad.
Tinct. Catechu.
Tinct. Gelsem.
Tinct. Ipecac.
Tinct. Kramer.
Tinct. Lavand. Co.
Tinct. Lobel. Æth.
Tinct. Nuc. Vom.
Tinct. Opii Camph.
Tinct. Scill.
Tinct. Stramon.
Ung. Acid. Boric. Flav.
Ung. Iod. Denig.
Vin. Antimon.

"The constitution of a number of preparations has been changed although the former names have been retained. The following are examples:—emulsions of liquid paraffin; linctus of codeine, and of squill and simple linctus; liquor antisepticus; compound codeine tablets; phenacetin and aspirin tablets; and sedative ointment.

"Like the National Formulary, the War Formulary contains a list of proprietary medicines with a note of alternative preparations having a reputed analagous therapeutic effect. But the list is comparatively short and appears to be confined to articles of foreign manufacture, whereas the older list was much more comprehensive, and, we should have thought, could have been brought up to date and reprinted. As we have already shown, the changes in individual formulae are numerous; it is hoped next week to discuss some of them in detail and to indicate the causes which have led the Committee to make various important alterations in prescribing and dispensing practice."



this is

PROTOWAX

—an entirely new type of wax with important possibilities for you

Briefly, Protowax is an amorphous (microcrystalline) wax developed for pharmaceutical and cosmetic formulation.

It is markedly different from waxes currently available. Unlike conventional amorphous waxes, it possesses a high degree of plasticity. Unlike Paraffin wax, it is free from objectionable crystalline particles.

A trial in your own laboratory will demonstrate that Protowax is able to hold oil without sweating, aids in the manufacture of smooth non-gritty products, contributes to the desirable qualities of easy spread and smoothness.

A working sample will be sent without charge on request on your firm's letterhead—and our technical staff will gladly cooperate with your own in exploring its possibilities for your products.

L. SONNEBORN SONS, INC.

Refiners of White Mineral Oil and Petrolatum

Refineries: Petrolia and Franklin, Pa.

NEW YORK • CHICAGO • BALTIMORE • PHILADELPHIA • LOS ANGELES

Southwestern Distributors: Sonneborn Bros., Dallas, Tex.

F. D. A. OPINIONS

"Comment is offered on the proposed circular as follows: We suggest that the data appearing in paragraph two on page one with respect to the relative potency of stilbestrol and estrone be deleted since from the reports which we have seen regarding the relative potency of these two substances there is very little agreement among various scientific investigators regarding this relationship. In our judgment, in order for this comparison to be made the specific circumstances under which the relative potencies are studied should be set forth and should include the animal used, the route of administration, the volume and type of vehicle, the end point to be measured and the time of response, all of which must of course be identical for the two compounds in order for any reference to a quantitative comparison of potency not to be misleading. In our judgment the chemical name of this substance would be more appropriately stated in this circular as alpha, alph'-diethyl-4,4' stilbenediol."

"The proposed label submitted with this application bears the statement 'Physicians should familiarize themselves with indications, dosage and precautions, supplied upon request.' You have not submitted the descriptive literature for this preparation which you contemplate supplying physicians upon their request. It will obviously be extremely difficult, if not impossible, for the Administrator to arrive at a conclusion that this preparation is in fact safe for use without having at hand all of the descriptive literature which you contemplate using for the drug. You should provide this Administration with five copies of this literature as a part of this application."

"The proposed circular for this preparation, which is to be distributed to practitioners apart from the market package, offers the product for the treatment of 'Pneumonia, meningitis, gonococcic infections, etc.' The dosage schedule, however, appears to be solely for the treatment of pneumonia. As you know, the dose schedule for sulfapyridine which has been found to be effective for the treatment of gonorrhea is materially less than the schedule for the treatment of pneumonia. The administration of sulfapyridine to the gonorrhea patient in the dosage recommended for pneumonia would entail unnecessary risk to that patient. You should revise your circular to include appropriate dosage recommendations for the use of the drug in the treatment of gonorrhea. The dosage schedule appearing under the caption 'Dosage for Adults' would then be more appropriately designated as the dosage for adults in the treatment of pneumonia. The recommendation that this drug is of value in the treatment of pneumonia would appear more appropriate if it were offered for the treatment of pneumonoccal pneumonia."

"This is the new American White Mineral Oil"

Remember the scarcities of World War 1? Since August 1, 1914, there had been no more imports of White Mineral Oil. But even as supplies ran low on druggists' shelves and in manufacturers' stockrooms, L. Sonneborn Sons, Inc. were already solving the problem of duplicating the special advantages of the imported product.

Nor have we been content to remain simply America's first successful refiners of White Mineral Oil. We have consistently taken the lead in improving the palatability and suitability of White Mineral Oil for therapeutic use. And made equally important improvements in the quality and types available for cosmetic use as well.

And today, we offer to the Pharmaceutical and Cosmetic Industries something which may be even more important than our exceptional range of uniformly high quality products. This is a Technical Service based on America's richest background of practical, pioneering development.

WHERE QUALITY COUNTS—COUNT ON SONNEBORN

WHITE MINERAL OILS

KAYDOL U. S. P. Heavy
ORZOL U. S. P. Heavy
PURITAN U. S. P. Heavy
ERVOL U. S. P. Light
BLANDOL U. S. P. Light
CARNATION
KLEAROL

PETROLATUMS U. S. P.

TYPE I: *Medium Consistency—White Protopet—Yellow Protopet and other colors*

TYPE II: *Soft Consistency—White Fonoline—Yellow Fonoline*

TYPE III: *Medium Consistency With High Melting Point White Perfecta*

SPECIALTIES

PROTOWAX—Amorphous (micro-crystalline) wax for pharmaceutical and cosmetic formulation.

SONO-JELL—Complete series for liquefying cleansing creams, pomades, ointments, etc.

DEO-BASE—Light hydrocarbon distillate refined to complete freedom from kerosene odor.

TRI-OL—Base for soapless oil shampoos. SONO-FOAM—Base for soap shampoos.

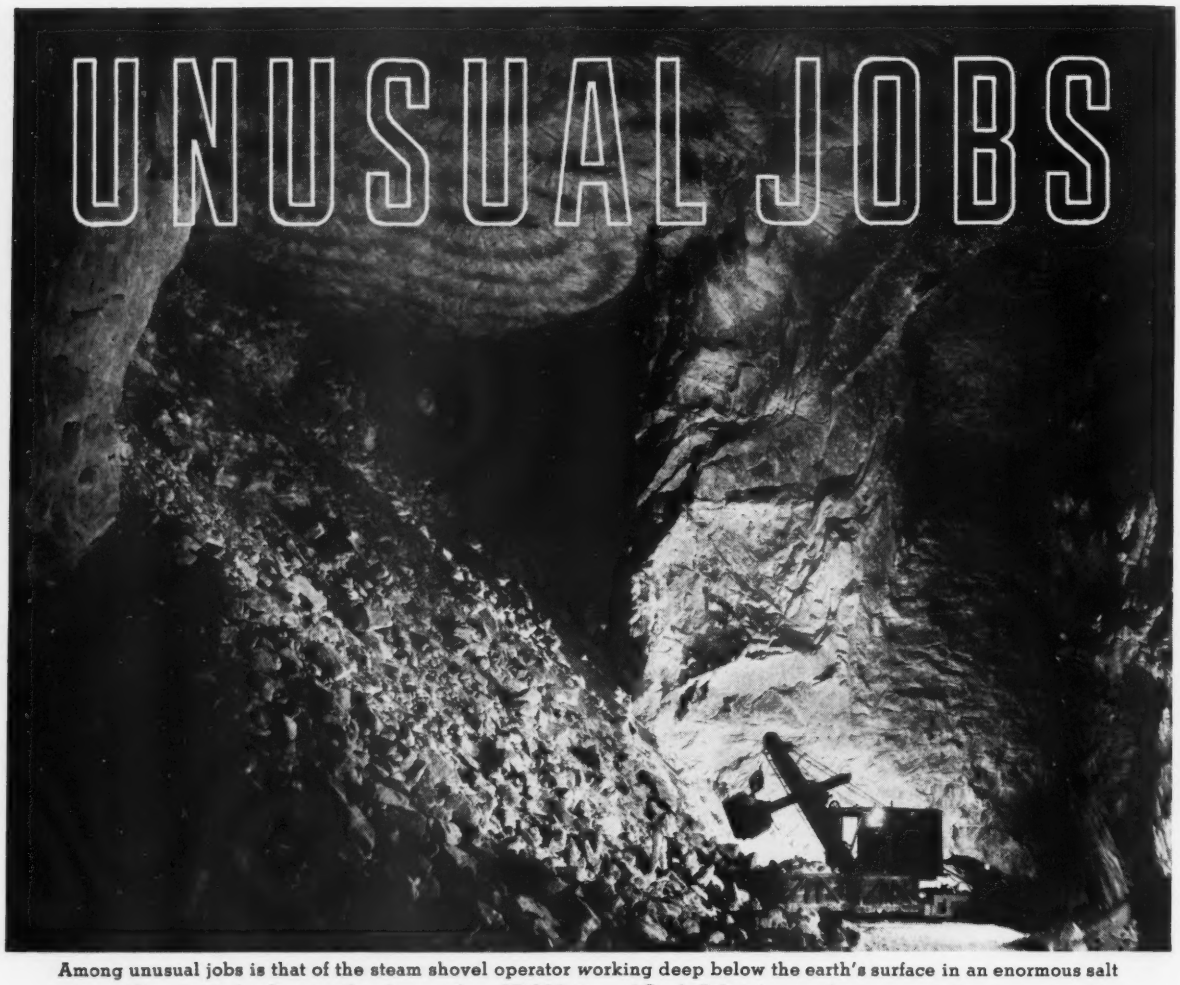
L. SONNEBORN SONS, INC.

Refiners of White Mineral Oil and Petrolatum. Refineries: Petrolia and Franklin, Pa.

NEW YORK · CHICAGO · BALTIMORE · PHILADELPHIA · LOS ANGELES · Stocks Carried in Principal Cities

Southwestern Distributors: Sonneborn Bros., Dallas, Texas

UNUSUAL JOBS



Among unusual jobs is that of the steam shovel operator working deep below the earth's surface in an enormous salt mine. Here he is loading a pile of more than 25,000 tons of Rock Salt into cars for transportation to processing equipment. Photo courtesy International Salt Company, Inc.

MATCHING IPI COLORS in collapsible tube decoration to exactly duplicate the color tones of the inks contained within is one of the unusual jobs that come to us from particular buyers. Users of IPI Inks can readily select the exact color tones they want by looking at the tubes. We're proud of these attractive tubes . . of an unusual job, well done.

A DISTINCTIVE CIGAR: This eggshell-thin cigar container is another unusual product by New England. It enhances the appeal . . preserves the quality and freshness of a fine cigar . . raises merchandising effectiveness to a new high degree of perfection.

New England SHEFFIELD PROCESS TUBES

When considering metal tubes for packaging, remember there is hardly a type or variety ever conceived that can't be made *better* by "New England". Whether it's unit containers, eye tip, interior coated . . tiny tubes or giants . . tin, tin coated or lead . . our exclusive "Sheffield Process" makes them tougher, yet pliable as a glove. And, whether your requirements are regular or unusual, you can depend upon our competent staff to cooperate to the limit. As the largest independent manufacturer, we offer you advantages that only New England gives. Will you write us about your needs?

NEW ENGLAND COLLAPSIBLE TUBE CO.

3132 SO. CANAL STREET, CHICAGO • NEW LONDON, CONN. • W. K. SHEFFIELD, 500 FIFTH AVENUE, NEW YORK
N. CAY MATTHIEU, 1448 WABASH AVE., DETROIT, MICH. • THE WILCO CO., 7016 McKINLEY AVE., LOS ANGELES, CAL.
EXPORT DIVISION: 116 NASSAU STREET, NEW YORK, U.S.A.

MERCHANDISING NEWS and PACKAGING NOTES

SET-UP BOX AND CARTON STANDARDS: The paper conservation committee of this industry consisting of Roy W. Peet, W. Van Alan Clark, Palmer J. Lathrop and John H. Maget, has issued the following report which is self-explanatory and which, because of its importance is reproduced here at length:

Work has progressed to a point where certain standards have been determined for set-up boxes and for folding cartons used on products first packaged in metal, glass, wood, plastic, paper, paperboard, and products which in themselves are durable. These proposed recommendations as to standards are given below. They have been gone over carefully by the set-up box and folding box industry committee, by certain consumer companies, and by the OPM Paper Conservation Committee. They will be made in the form of recommendations to the OPM on Monday, December 8, unless there is serious objection to any one of them. We urge that technical people in your organization go over these proposed recommendations carefully, advising us at once if you have any serious objection and, in such case, state specifically the nature and reason for your objection. These objections will in turn be passed on to the Paper Conservation Committee for their consideration.

The problem before the OPM Paper Conservation Committee is of course, that of making recommendations to the OPM which will save as much paper or paperboard as possible but with as little harm or dislocation to industry as is possible. Everyone must realize that there are some things we would prefer not to do but under the emergency of impending shortages savings must be made.

SET-UP-BOXES

14. Paperboard used in the manufacture of base and cover heads of round dusting powder boxes shall be of a caliper not greater than .045.

Board now used in cover heads varies from .045 to .060 and in base heads from .045 to .125.

15. Paperboard used in the manufacture of base and cover heads of round face powder boxes which retail for twenty-five cents or less shall be of a caliper not greater than .030.

Board now used in cover heads varies from .030 to .040 and in base heads from .033 to .050.

16. Paperboard used in the manufacture of base and cover heads of round face powder boxes which retail at a price higher than twenty-five cents shall be of a caliper not greater than .035, except that if such boxes be of a diameter greater than three and one-half inches the caliper of the board used for the base and cover head shall be not more than .040.

Board now used in cover heads varies from .040 to .050 and in base heads from .040 to .125.

17. All platforms shall be eliminated from boxes used for packing individual items which lie flat, the size of the box being reduced to the size of the article to be packed.

18. Die-cut platforms in rectangular combination set boxes shall be reduced in size to allow no more than one-half inch on side margins and between articles, except that where the articles packed flare out or extend beyond the die-cut openings sufficient additional space may be allowed so that the articles clear at their greatest width or diameter.

19. All outside containers or sleeves used for the packing of combination set boxes shall be made of plain unlined chip or newsboard of a caliper not greater than .030.

Board now used varies from .030 to .048 and a great many containers are lined on one or both sides.

20. All die-cut platforms shall be eliminated from rectangular boxes used for the packing of soap; dividers may be used in place of such platforms.

This will cut down the size of the box as well as effecting the saving of platform board.

21. Paperboard dividers used in rectangular soap boxes shall be of a caliper not greater than .030.

Now usually made from .040 caliper.

FOLDING BOXES

22. The caliper of paperboard used in folding cartons for products first packaged in metal, glass, wood, plastic, paper, paperboard, and products which in themselves are durable, shall not exceed the maximum caliper for the marked net weights shown in the follow-

ing schedule, with allowance for standard tolerances recognized by the National Paperboard Association.

(*Note:* Calipers shown are net for board and wrapper, exclusive of such coatings or liners as asphalt, wax, clay, etc.)

Products Weighing	*Maximum Caliper*	*Pounds per 1000 Sq. Ft.* *B.M.**	*W.P.C**
Less than 8 oz.	.016	65	69
8 oz. or more but less than 14 oz.	.018	72	77
14 oz. " " " " " 24 oz.	.020	80	82
More than 24 oz.	.024	90	96

*B.M. means bleached manila lined chip—No. 2 finish.
*W.P.C. means patent coated, regular finish.

In explanation of the above standards, a very broad survey was made in drug stores of products so packaged. It was determined that approximately one-third of the products in each net weight group is now using the proposed caliper or less. Approximately two-thirds of each group are now using more than the proposed calipers. Your committee feels that if one-third of the manufacturers have found it practical to use the standards recommended above without regard to the need of paperboard conservation, it seems desirable for the other two-thirds to adopt these standards in the present emergency.

Surveys conducted by two large organizations of products packaged in glass indicate that it is safe to eliminate any corrugated inner liner on bottled goods weighing 8 oz. or less. Many manufacturers do not now use corrugated inner liners on bottles weighing more than 8 oz. The problem of breakage has been seriously considered by the Committee and it is their opinion increases in breakage due to adoption of above standards will be negligible with no additional inner protection other than that now used. The committee strongly urges that all companies experiment with the possibility of eliminating any inner liner on bottled products weighing 8 oz. or less. We do not want to make this in the form of a recommendation to the OPM but feel it is thoroughly practical for nearly any product.

PAPER CONSERVATION COMMITTEE

Roy W. Peet, *Chairman*,
W. Van Alan Clark
Palmer J. Lathrop
John H. Maget.

Roy W. Peet,
Colgate-Palmolive-Peet Co.,
105 Hudson Street,
Jersey City, N. J.

THE COSMETIC TREND: Older buyers of cosmetics, remembering the boost that American toilet goods sales had through World War 1, refuse to get jittery because of forecasts of early shortages in cosmetic materials, changes in packaging, etc. The point is made that the cosmetic industry can deal with this situation more effectively now than it could 25 years ago and that new formulas, revised packages and even complete replacements of standard articles will not hurt in a market so long as it abounds with plenty of new and well-supplied-with-cash customers. They would regret though if manufacturers would cut their advertising efforts for the coming year. Counter demand is heavily in favor of the advertised items and buyers will give them preference, if for no other reason but that they can be safely carried in stock in the quantities in which most stores prefer to do their ordering now.

While counters are well supplied with articles at the accustomed price levels, and stores have little difficulty of obtaining promotional merchandise, there is nevertheless a noticeable tendency to supplant accustomed unit levels with the next higher ones. In other words, the buyer who heretofore bought a 98 cent article for his promotions will now look for a $1.29, expecting it to justify the higher price by better appearance, quality or larger size. This tendency is going through the whole line. It may ultimately lead to the abandonment of the lower price groups and the establishment of new price standards upon the higher level. However, this point has not been reached yet.

Manufacturers are reluctant to say much about future packaging plans, but it seems apparent that most of them are sufficiently equipped to carry on much the same as in the past for the first half of the new year anyway. Substitutes and substitutes for substitutes are the order of the day but the effort is directed to making the necessary substitutions and at the same time keeping the effect of beauty and glamour that is now such a vital factor in perfume and cosmetic packaging.

Where two or three shades of nail polish were offered during past seasons, now only one appears. For the Spring it may be wise to offer two, one light and one deep shade, because so many women feel that they ought to wear a lighter polish in the Spring and Summer and it may be difficult to please them with only one shade offering. If the color problem can be solved with only one color a season, it is better for everyone concerned—the manufacturer preparing it—and the salesgirl endeavoring to sell it! New lipstick shades continue to sell, particularly if they lend themselves to a merchandising tie-up with other departments. Predictions on tones would appear to be slightly premature at this point. However, the red-red and blue-red variations seem to maintain their popularity.

Important changes are in the making in the variety store trade. Keyed to nickel and dime unit sales these stores now are forced through the new tax to make fractional transactions in single cents while the rising cost of many cosmetics is pushing their sales price above the accustomed rounded off price limits. As the result variety store counters begin to take on the appearance of drug store cosmetic counters and cosmetic manufacturers are wondering whether these will not soon be an outlet for merchandise selling now at 39 cents over the drug store counters. Variety chain store managers seem to be favorable to the idea.

A WORLD
WITHOUT BEAUTIFUL WOMEN

Woman has always been man's inspiration. Today, the thunder of Mars echoes 'round the earth, yet the petal softness of a woman's cheeks, the sparkle of her eyes, the mystery of her lips will forever be one of man's great incentives to fight for the right . . . to create a better world from the ashes of a world gone mad. We're proud to be an integral part of an industry whose only mission is loveliness and beauty, at a time when these rare qualities are reflected in the courage, stamina and morale of mankind. May we never see a world without beautiful women!

PRIVATE LABEL COSMETICS

LIPSTICK · ROUGE · FACE POWDER · EYE SHADOW · MASCARA · BEAUTY AIDS

Products Liability Insurance Carried

PARIS COSMETICS, INC.

116 WEST 14th STREET, NEW YORK, N. Y.

CABLE: PARISTIC NEW YORK

Greetings!

WE think it particularly appropriate at this time to extend our sincerest thanks to all our old friends and the many new friends made in 1941 for your patronage and cooperation during the year now drawing to a close. We heartily wish you all—PROSPEROUS 1942!

Firmenich & Co., Inc.

135 FIFTH AVE., NEW YORK

CHICAGO OFFICE: 844 NORTH RUSH STREET

Almost Right Is Wrong

Pennsylvania Glass Products Company
428-32 N. Craig Street, Pittsburgh, Pennsylvania, U. S. A.

Season's Greetings to All

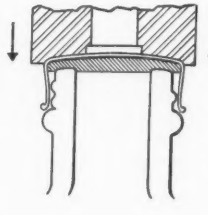
Packaging Insurance PAYS OFF RIGHT HERE!

"What a machine! Fast. Efficient. Works like a horse. Today more than ever, we're sold on Alseco Machines and Seals . . . on Packaging Insurance."

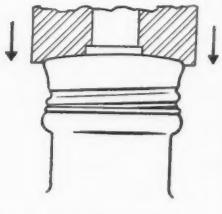
It's a fact. Fast, trouble-free Alseco Sealing Machines pay off in lowered production costs. And Alseco Rolled-On seals pay off in positive, tailor-made sealing that keeps products *right*—in easy opening and perfect reclosure that keeps consumers happy.

That's why Alseco sealing is "Packaging Insurance" to present users.

HOW THE ROLLED-ON METHOD WORKS



Plain-skirted Alseco Seal is uniformly seated. Under stationary top pressure, container lip is imbedded in liner evenly all around.



Then, to hold that seal securely, threads are Rolled-On, using the container's own threads as the pattern. Possibility of leakage or evaporation is reduced to minimum. Alseco Seal stays tight, but opens and recloses easily because it is tailor-made.

Trade Mark Reg. ALSECO SEALS U. S. Pat. Off.

TAILOR-MADE

ALSECO SEALS

ALUMINUM SEAL CO., 1523 THIRD AVE., NEW KENSINGTON, PA.

At your service: 27 years of experience building quality seals and sealing machines.

DEFENSE COMES FIRST

The urgent and rapidly expanded requirements of National Defense have stopped the sale of Aluminum for seals. Temporarily, some types of Alseco Seals are being supplied in metals other than Aluminum.

However, Aluminum production capacity is being greatly increased. When the emergency is past, there will be more Aluminum available for seals than ever before. And you can be sure that the Aluminum Seal Company's research, continuing now as always, will keep Alseco Seals and Sealing Machines "out in front."

LILLY DACHE PERFUMES: Lilly Dache, famous millinery designer, has expressed her ideas of modern glamour in another medium, perfume. Mme. Dache has launched two heady new scents, "Dashing" and "Drifting." "Dashing" is a vibrant scent, good for wools and furs. Its bottle is a plastic statuette of a French poodle sitting up with an American beauty bow

in his hair. The bottle is encased in an oval box of American beauty satin. "Drifting" is a dreamy fragrance held in a bottle shaped like a quaint Victorian bust. It is part green plastic, part blown glass with tiny colored feathers rising from the throat, in Daliesque place of a head. This comes in a box of green satin edged with American beauty. Both perfumes come in one size only, two ounces at $28. Toilet water in each scent has been created to supplement the perfume. This comes in square, tall wooden topped bottles encased in American beauty (for Dashing) or green (Drifting) satin boxes and sell in two sizes, five ounces for $5 and eight ounces for $8.50. There is also a sachet—a miniature hat, the size of a doll's hat—on a stand, with the sachet concealed in the crown. Embedded in the satin covered base of the stand is a vial of the perfume. Sachets sell for $10 each.

That Cellophane Order

(*Continued from page 629*)

"*Answer* Yes. The Order means that all Suppliers and Users of cellophane must dispose of stocks, to the extent prohibited, within 60 days, i.e. January 8, 1942.

"8. *Question* If so, what is the remedy of a Supplier or User who has stocks on hand in excess of 60 days' supply?

"*Answer* He should make application to this Office stating the stocks as of November 8, 1941, and as of January 8, 1942 (estimated); his receipts during the interim period; his consumption during that period; the efforts he has made to dispose of the same to a permitted use, or to cancel his order, and the estimated amount of time he will require to use up these excess stocks."

The answer to question (8) would seem to indicate that permission for shipments after January 8 may be granted where the cellophane involved has been so processed that it cannot be used for any other purpose, but apparently each case is to be decided on its merits and applications for such special permission must be made immediately with Mr. Smiley's office. This interpretation, of course, affords relief for cosmetic manufacturers up against the situation described above, but it seems like the long way around when an amended ruling, simply cutting off the supply at the source, would presumably accomplish the same purpose.

In fact, an amended ruling is apparently a good idea for at least one other reason disclosed by these interpretations of November 22. Interpretations 1 and 2 read as follows:

"1. *Question* Is the Order limited to materials utilizing phenol, glycerine, chlorine as specified in the WHEREAS clause?

"*Answer* No. The Order covers cellophane and similar transparent materials derived from cellulose, whatever the chemical process.

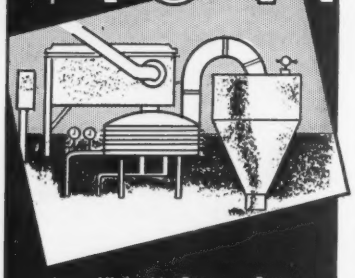
"2. *Question* Does the Order cover all transparent materials derived from cellulose regardless of shape or thickness?

"*Answer* No. It applies only to *similar* materials. We have interpreted similar to mean having a gauge less than .005"."

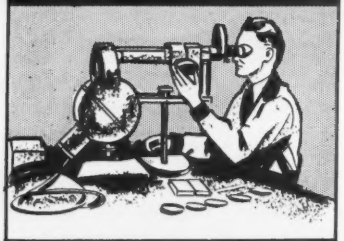
By referring back to the language of L-20 itself, quoted in the first paragraph, it is obvious that there is good reason for asking this question. The implication of that language is that it is necessary to restrict the uses of cellophane because the manufacture of that material "requires utilization of large quantities of chlorine, phenol and glycerin and national defense requirements have created a shortage, etc." But, all of the "similar transparent materials derived from cellulose" do not require chlorine, phenol and glycerin in their manufacture and the question naturally arose which O.P.M. answered in its November 22 interpretations as quoted above.

This interpretation, however, left much dissatisfaction in its wake. It is pointed out that the use of cellophane is being restricted to save chlorine, phenol and glycerin but that neither the ruling or the interpretations given to date give any reason for restricting the use of similar transparent materials made of cellulose which use none of the three aforementioned chemicals. Just what is to be saved by restricting the use of these other materials? That is the question which is being asked and which an amended ruling would doubtless answer to everybody's satisfaction, thus saving time and trouble all around.

NOW You can get it! The Finest Face Powder Produced



Kolmar High Air Pressure Process produces the uniform small particle size for which Soft-As-Silk Powder is known.



The Photometer scientifically records and maintains absolutely uniform and correct shades of all make-up products.

Make these tests to prove our statements of Kolmar superiority: Apply Soft-As-Silk powder and any other brand to opposite sides of the same face. Note which brand applies most smoothly and adheres longest. Examine Soft-As-Silk Powder under a microscope to see uniform color disbursement. The bite test will disclose freedom from grit.

PERFECTED SINCE 1929 but only recently manufactured in quantity.

TWELVE YEARS AGO Kolmar developed a unique high air pressure process for powder (and rouge) which produced uniform particle size, fine satiny texture and perfect color distribution.

UNTIL RECENTLY, because of constantly increasing demands for other Kolmar products, we have been able to accept only very limited orders for Kolmar Soft-As-Silk Powder.

BUT TODAY YOU CAN GET IT: in any color, in any quantity, in bulk, in your own boxes, or completely packaged in boxes supplied by us.

WE KNOW that Kolmar Soft-As-Silk Powder builds repeat business by its smooth application, naturalness, imperviousness to water or perspiration, superior smoothness, adherence, lasting qualities, and absolute purity. Kolmar Soft-As-Silk Powder is made of the finest available materials, regardless of cost.

WRITE FOR SAMPLES TODAY

Manufacturers of cosmetics for private label brands only. We never compete with our clients. We also protect the interests of our clients with Products Liability Insurance.

Kolmar laboratories

MILWAUKEE • HOBOKEN

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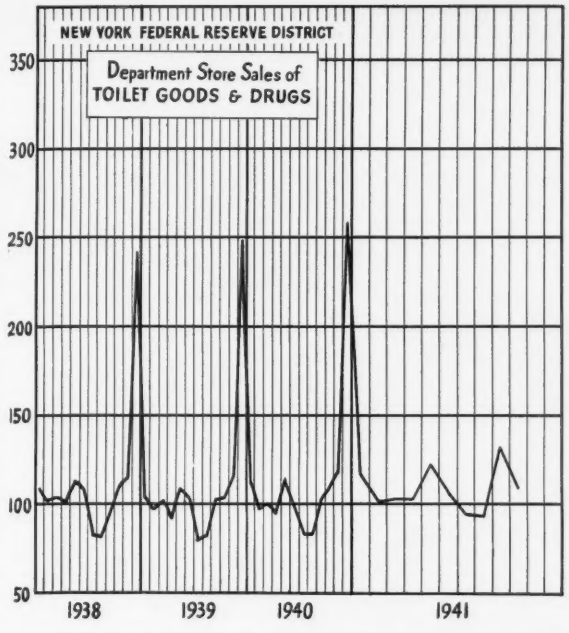
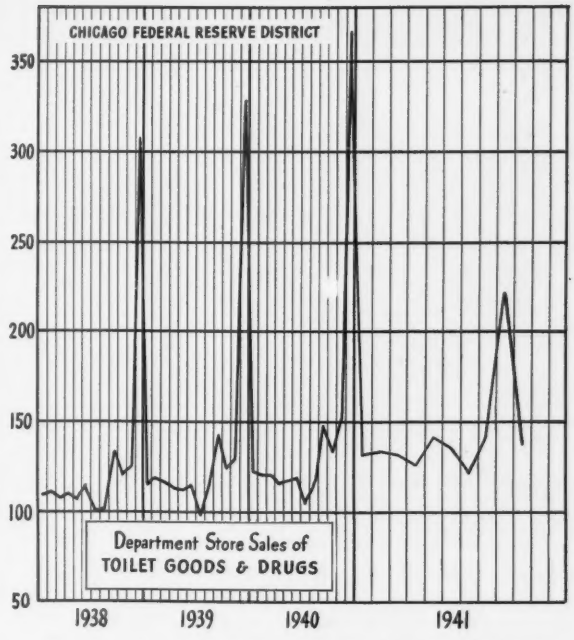
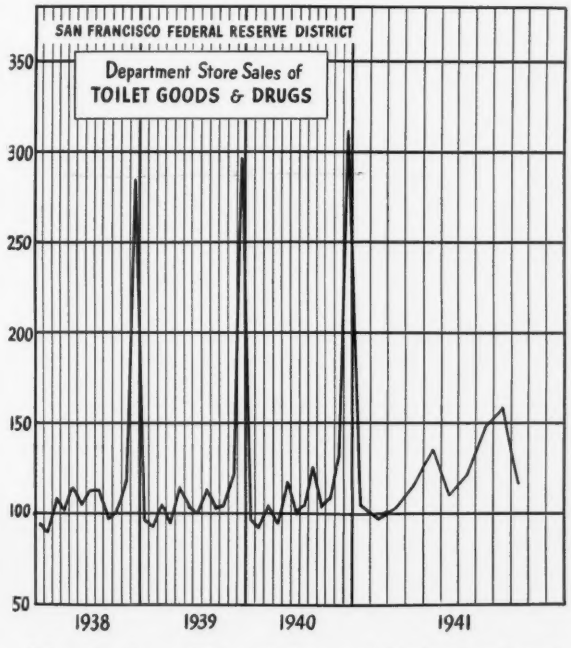
Mr. Warren Curry . . . . 3950 Club Drive, Atlanta, Ga.
Mr. Norman Kole . . . 980 Merchandise Mart, Chicago, Ill.
Mr. R. F. G. Byington, 1260 N. Western Ave., Los Angeles, Cal.



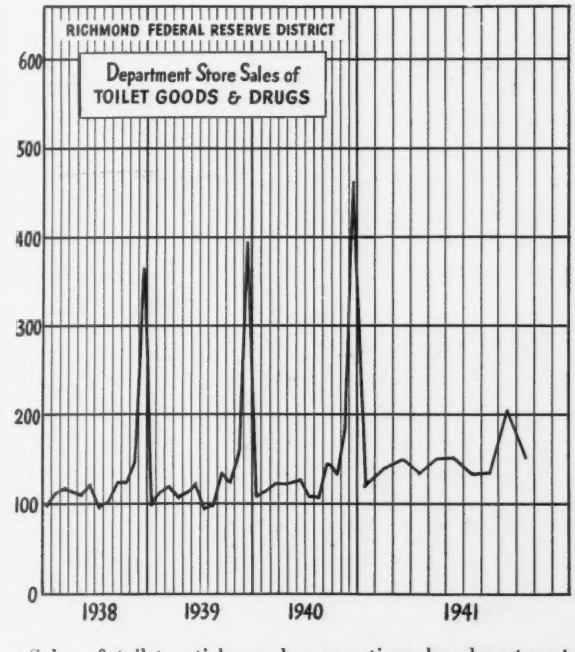
Sales of toilet articles and drugs by department stores in the New York Federal Reserve District in October 1941 were the same as in the same month of 1940. Corresponding unadjusted index numbers are therefore 109.7 for October 1941, 131.7 for September 1941, and 109.7 for October 1940.



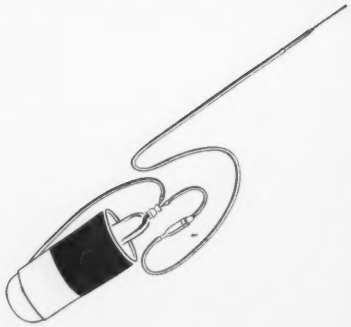
Sales of toilet articles and drug sundries by department stores in the Chicago Federal Reserve District were 3 per cent. greater in October 1941 than in the same month of the preceding year. This corresponds to unadjusted index numbers of 137.5 for October 1941; 221.6 for September 1941, and 133.5 for October 1940.



Sales of toilet articles and drug sundries by department stores in Los Angeles were 13 per cent. greater, in San Francisco were 3 per cent. less, in stores of the Pacific Northwest were 16 per cent. greater and averaged 7 per cent. greater for the whole San Francisco Federal Reserve District in October 1941 compared with October 1940. For the whole district, these figures correspond to unadjusted index numbers of 117.1 for October 1941, 158.7 for September 1941, and 109.4 for October 1940.



Sales of toilet articles and preparations by department stores in Baltimore were 10 per cent. greater, in Washington were 17 per cent. greater and averaged 13 per cent. greater for the Richmond Federal Reserve District in October 1941 compared with October 1940. Unadjusted index numbers for the whole district were 150.9 for October 1941, 205.4 for September 1941, and 133.5 for October 1940.



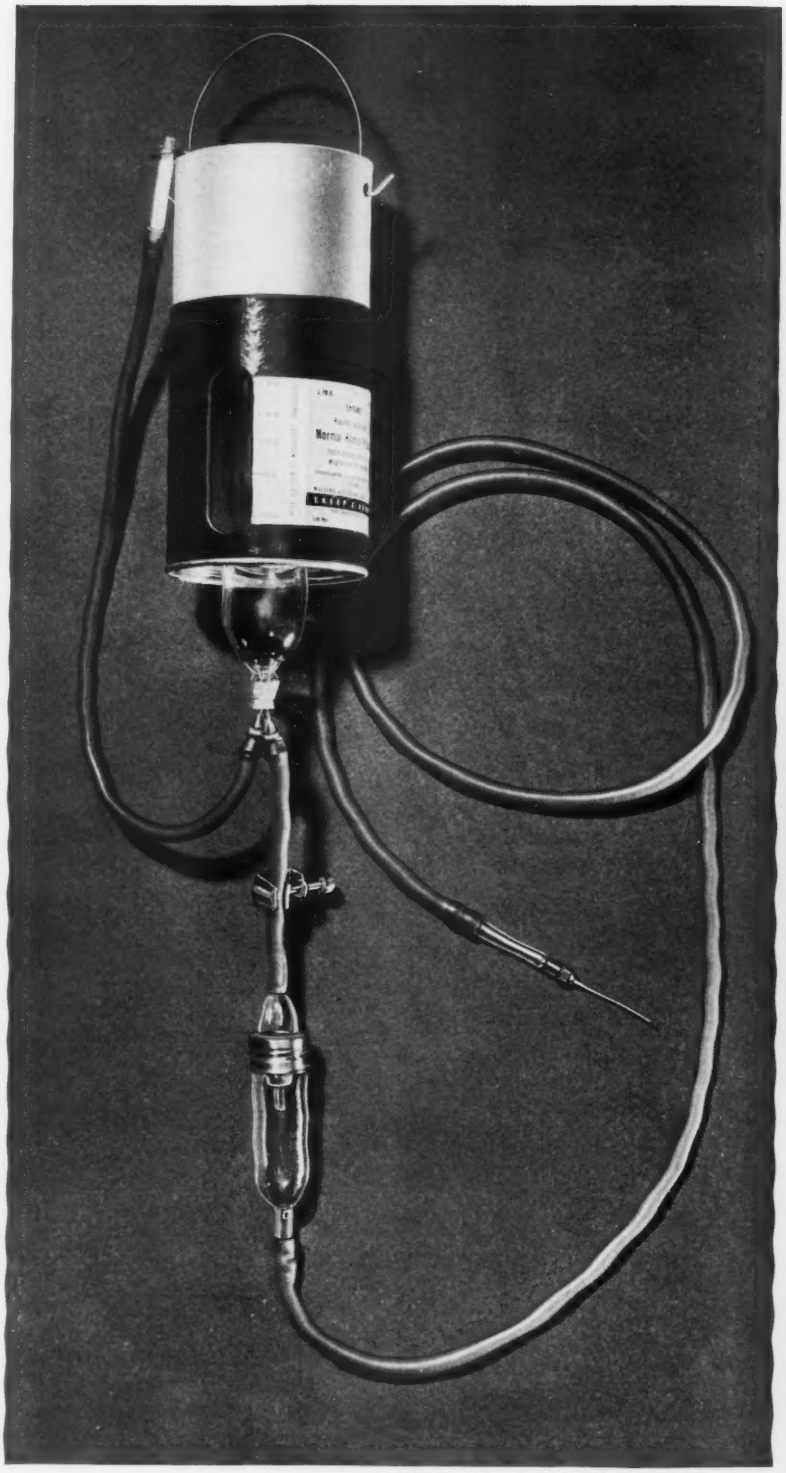
WEAPONS FOR LIVING

METAL PARTS FABRICATED BY SCOVILL

In normal times, Scovill advertising has always featured the vanity cases, lipstick containers and closures for which Scovill has been a prime source. But Scovill was also an important fabricator of metal parts used by pharmaceutical and biological houses.

Many of our customers are currently making products for National Defense, and Scovill is still their source of supply for metal parts. With facilities for a wide range of metal part production, Scovill can turn its hand to clamps and metal caps for blood plasma sets, and finger rests, plunger rods or turned parts for hypodermic syringes, with the same efficiency as it produces cosmetic container items.

If you are using or considering metal parts in quantity for defense work, ask Scovill about making them.



Scovill fabricates metal parts for human blood plasma units supplied by Sharp & Dohme

A "MASTERS OF METAL" booklet outlines these Scovill facilities in some detail. We'll gladly send a copy on request. Address 69 Mill Street, Waterbury, Connecticut.

Scovill
MANUFACTURING COMPANY
WATERBURY, CONN.

Boston, Providence, New York, Philadelphia, Syracuse, Pittsburgh, Chicago, Cincinnati, San Francisco, Los Angeles
IN CANADA: 334 King Street, East, Toronto, Ontario

LILLY DACHÉ

Lilly Daché, well-known millinery designer, has introduced two new scents, Dashing and Drifting. Dashing is a vibrant, blithe scent, good for wools and furs. Its bottle is a plastic statuette of a French poodle sitting up, with an American beauty bow in his hair. This is encased in an oval box of American beauty satin. Drifting is a dreamy fragrance which comes in a bottle shaped like a quaint Victorian bust. It is part green plastic, part blown glass with tiny colored feathers rising from the throat, and is packaged in a box of green satin edged with American beauty. Both perfumes come in one size only, 2 ounces.

LILLY DACHÉ

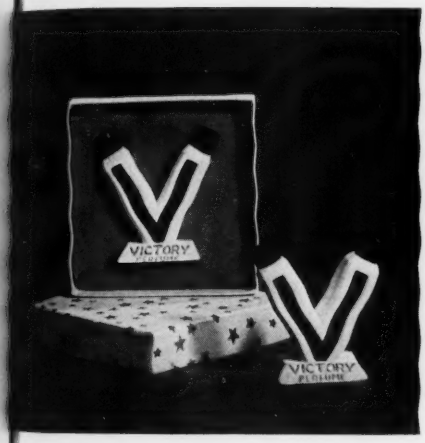
CHEN YU

"Chip Chek" is the new finishing lacquer offered by Chen Yu. Chip Chek is applied over the last coat of Chen Yu. It speeds drying and steps up the lustre of the polish. It comes in the same miniature Chinese vase as the nail polish.

CHEN YU

LEJEUNE

Lejeune's Victory perfume consists of two ½ dram vials enclosed in a white alabaster casting. The words "Victory Perfume" and other data are molded directly into the base. The "V" is painted red and the whole is topped off with blue caps, thus presenting the "V" in red, white and blue.



LEJEUNE

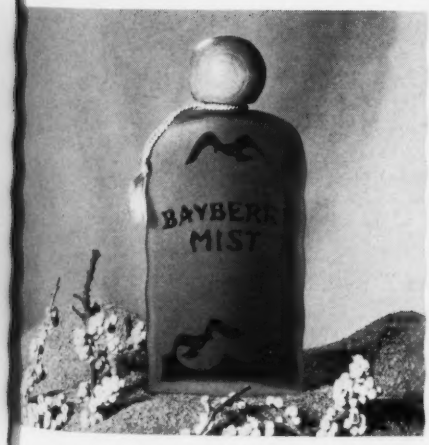
ORLOFF

The quartet of Orloff perfumes makes a handsome presentation. The four bottles of perfume rest in a satin-lined, velvet-covered jewel box. Available in a choice of one or four Orloff fragrances, Nikki, Gardenia Russe, American Blossoms, and Indies Spice.

ORLOFF

PERSONAL APPEARANCE *PRODUCTS*

"Bayberry Mist," has been designed by Personal Appearance Products to spell romantic Cape Cod—a bouquet delicate as mist from the sea itself, combined with the tang of bayberries and sweet fern. The bottle for this cologne was designed by a member of Provincetown's art colony, Thomas G. Blakeman. The inspiration for the design came from some of the craft work done by the Coast Guardsmen in their remote winter stations on the storm swept beaches of Cape Cod's shores. The result is a finely textured, frosty, sand-etched bottle.



PERSONAL APPEARANCE PRODUCTS

MILK MAID

A delightful gift is the fitted billfold in gold kid by Milk Maid. It is also made up in leather, luxuriously lined and equipped with a Milk Maid compact and lipstick, rouge and change purse.

MILK MAID

FOR THE FRAGRANT

FRESHNESS

OF THE TRUE GARDENIA

Dow METHYL PHENYL CARBINYL ACETATE

Few aromatic chemicals are as indispensable in recapturing the true gardenia note as Dow Methyl Phenyl Carbinyl Acetate. This exceptional synthetic aromatic is used with outstanding success wherever cleanliness, freshness and superior strength are essential characteristics.

Created expressly for use in a broad market, its current price makes it available for odor-masking purposes.

Dow produces a wide variety of synthetic aromatic chemicals. Each is a product of Dow's broad program of continuous research that is responsible for the development of over 300 varied chemicals indispensable to industry and national defense.

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

NEW YORK • ST. LOUIS • CHICAGO • SAN FRANCISCO • LOS ANGELES • SEATTLE • HOUSTON

NEWS

Associations

Penick Heads Drug Section

The newly elected executive committee of the Drug, Chemical and Allied Trades Section of the New York Board of Trade held its first meeting December 4 and elected officers for the coming year. S. Barksdale Penick, Jr., Executive Vice-president of S. B. Penick & Co., was elected chairman; Victor E. Williams, Vice-president of Monsanto

S. B. PENICK, JR.

Chemical Co., vice-chairman; Robert B. Magnus, Vice-president of Magnus, Mabee & Reynard, treasurer; and Carl M. Anderson, of Merck & Co., counsel.

The executive committee was elected at the fifty-first annual meeting of the Section which was held at the Drug & Chemical Club, November 18. John J. Toohy, E. R. Squibb & Son, retiring president, was toastmaster and annual reports were given by Robert B. Magnus, treasurer; Carl M. Anderson, counsel; John C. Ostrom, secretary; and E. T. T. Williams, chairman of the membership committee.

In addition to the newly elected officers the executive committee consists of: Harold M. Altshul, Ketchum & Co.; C. C. Caruso, Schieffelin & Co.; James J. Clark, Liggett Drug Co.; Hugh Crosson, McKesson & Robbins, Inc.; James DeCesare, White Laboratories, Inc.; William W. Huisking, Chas. L. Huisking & Co.; J. H. Karrh, Victor Chemical Works; Elvin H. Killheffer, E. I. duPont de Nemours & Co.; Paige D. L'Hommedieu, Johnson & Johnson; Guy L. Marsters, Norwich Pharmacal Co.; Robert J. Quinn, Mathieson Alkali Works; J. P. Remensnyder, Heyden Chemical Works; Carroll Dunham Smith, Carroll Dunham Smith Pharmacal Co.; Ira Vandewater, R. W. Greeff & Co.; Lloyd I. Volckening, Ivers-Lee Co.; and E. T. T. Williams, Becton, Dickinson & Co. Turner F. Currens was elected an honorary member of the executive committee.

Francis J. McDonough, president of New York Quinine & Chemical Works, was re-elected the Section's representative on the board of directors of the New York Board of Trade, and John C. Ostrom was re-appointed secretary of the Section. Retiring chairman, John J. Toohy, Manager of Distribution for E. R. Squibb & Sons, automatically becomes a member of the Advisory Council succeeding James C. Chilcott, President of the Maltine Company.

Proprietary Assn. Meeting

The scientific section of the Proprietary Association held its mid-year meeting at the Biltmore Hotel, New York, Wednesday, December 3. Dr. George F. Reddish is chairman of the section.

St. Louis Christmas Party

The Associated Drug & Chemical Industries, St. Louis, holds its second annual Christmas party December 17 at the Starlight Roof, Hotel Chase, that city. The dinner will be followed by dancing.

A.P.M.A. Winter Meeting

The mid-year meeting of the American Pharmaceutical Manufacturers' Association was held at the Mayflower Hotel, Washington, December 8 and 9. Dr. F. B. Fisk, chairman of the contact committee, and Dr. C. W. Sondern, chairman of the research board, were in charge of the session the morning of the 8th which was devoted to scientific papers and reports. December 9 at the afternoon session the A. P. M. A. scientific prize was awarded to Dr. Tom Douglas Spies for his work on vitamin therapy.

Other speakers at the meeting were Paul V. McNutt, Federal Security Administrator; Charles Wesley Dunn, general counsel for the association; Dr. J. J. Durrett, of the Federal Trade Commission, and representatives of the Food and Drug Administration.

F.E.M.A. Spring Meeting

The thirty-third annual convention of the Flavoring Extract Manufacturers' Association will be held at the Hotel Pennsylvania, New York, May 18, 19 and 20.

John H. Beach, president of the association, has called a meeting of the executive and entertainment committees for Sunday, May 17.

Chicago Drug Assn. Lunch

At the luncheon of the Chicago Drug & Chemical Association, held at the Palmer House, November 27, Lew Fonseca showed his film, "Batting Around the American League." At the October 30 meeting Count Byron De Prorok, director of Franco-American Archaeological Researches in North Africa, spoke on "North Africa from Sheba to Sellassie" and showed colored motion pictures taken during his explorations.

Exchange BRAND

Citric Acid

U·S·P·

CRYSTALS • GRANULAR • POWDERED

MADE IN WORLD'S LARGEST LEMON PRODUCTS PLANT
BACKED BY THE SUNKIST GROUP OF 14,500 CITRUS GROWERS

Located near thousands of acres of lemon groves, this modern plant produces a complete line of fine lemon products.

Copyright, 1940, California Fruit Growers Exchange, Products Dept.

CALIFORNIA FRUIT GROWERS EXCHANGE, PRODUCTS DEPARTMENT

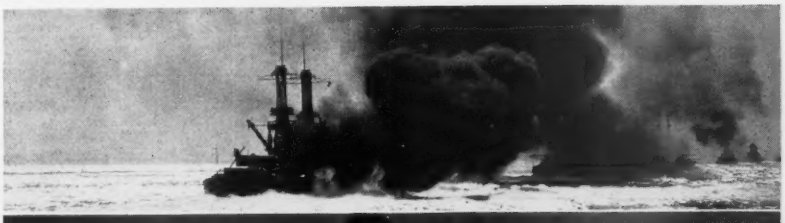
189 W. MADISON ST., CHICAGO — **ONTARIO, CALIFORNIA** — 99 HUDSON ST., NEW YORK

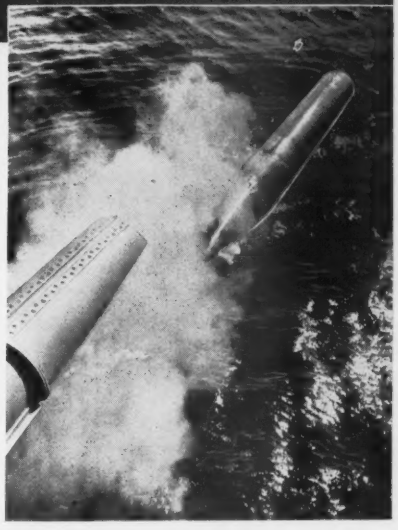
WAREHOUSE STOCK USUALLY CARRIED IN NEW YORK, CHICAGO, PHILADELPHIA, SAN FRANCISCO

U.S.I. ALCOHOL NEWS

December ★ A Monthly Review of Technical Developments for Chemists and Executives ★ 1941

ALCOHOL ESSENTIAL IN DEFENSE





Smokeless powder for firing shells, airplane construction and operation, and torpedo propulsion are among the many defense uses for ethyl alcohol. Medical applications also consume large quantities of alcohol.

Large Quantities Needed in Many Vital Phases of Current Program

Ethyl alcohol — always one of industry's essential raw materials — has taken on even greater importance as a result of the requirements of the defense program.

Because of the extraordinary diversity of alcohol's uses, enormous quantities are being consumed for defense purposes, with a consequent limitation of the amounts available for non-defense use.

In Smokeless Powder

The manufacture of munitions represents one of the many important phases of alcohol's utility. Alcohol is employed as a dehydrating agent in the manufacture of the nitrocellulose needed in munitions; as a wetting agent in treating nitrocotton for safe storage and shipment; and as a solvent in making gelatin dynamites and smokeless powder. It has been estimated that every time a 16-inch shell is fired, a 55-gallon drum of alcohol is indirectly consumed.

In Torpedo Propulsion

Firing a torpedo calls for alcohol. Here the alcohol is used directly, to furnish the motive power for propelling the torpedo.

Another important application of alcohol is its use as a de-icing fluid for propellors, carburetors and windshields in addition to its employment in indicating devices for aviation and marine service: compasses, gauges, thermometers, barometers, and other instruments.

Medical Applications

The antiseptic properties of alcohol naturally lead to many medical uses. Not only is it used directly for such purposes as the sterilization of instruments and supplies, but it serves also as one of the most important raw materials in the production of anesthetics and of many types of drugs and pharmaceuticals. Ether and ethylene, for example — two of the most widely used anesthetics — are both produced from alcohol, while injections of alcohol itself are used as a therapeutic nerve block for the relief of pain.

Other Typical Applications

Many of the other phases of alcohol's importance in defense result from its utility as a raw material in the manufacture of other chemicals. Ethyl acetate, an extremely important solvent in the manufacture of airplane "dopes," is an alcohol-derived chemical, which is used also in the formulation of many of the lacquers now needed in large quantities for finishing defense products.

These applications represent only a few of the outstanding phases of alcohol's vital role in carrying out the defense program, but they serve to indicate the extent to which alcohol is consumed for emergency needs.

TECHNICAL DEVELOPMENTS

For further information, write U.S.I.

A new colloid mill adapts a triple processing action to the production of heavy colloidal dispersions, according to the maker, who recommends it for use in the manufacture of ointments, creams, soaps, and many other products. **(No. 520a)**

A new aromatic compound can be used for complete replacement of hydroxycitronellal in all toilet preparations in which the latter substance was previously used, according to the manufacturer. **(No. 521a)**

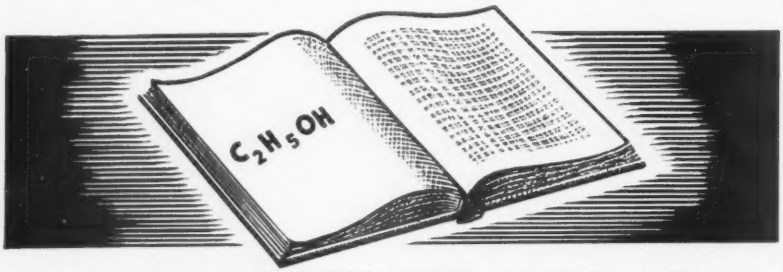
Cleaning of painted walls is facilitated by a new clear, transparent finish that can be applied over wall paints. Maker says that it can be used in plant or office, and that it prevents dirt and grime from penetrating pores of the paint. It can be removed by clear water, taking all dirt with it. **(No. 522a)**

A new preservative for wood floors cannot scuff or chip off, because it penetrates the wood, it is reported. Maker states that the material gives preservation as deep as it penetrates. **(No. 523a)**

An adsorbent material which has been used in the past in the combined determination of thiamin and riboflavin, may be successfully employed also in the decolorizing of oils, fats, and waxes, and in the selective adsorption of hormones, dyes, and many other compounds, it is claimed. **(No. 524a)**

U.S.I. INDUSTRIAL CHEMICALS, INC.
60 EAST 42ND ST., NEW YORK (USI) BRANCHES IN ALL PRINCIPAL CITIES
INDUSTRIAL ALCOHOL IN ALL GRADES AND ALL FORMULAS

THE ALCOHOL PRIMER



NO. 8 OF A SERIES ON THE SELECTION AND USE OF INDUSTRIAL ALCOHOL

S.D. 38, 38A, 38C, 38D, and 38E

These five formulas of Specially Denatured Alcohol may conveniently be considered together, since each is authorized for a relatively limited number of applications.

The authorized composition for S.D. 38 calls for the addition to 100 gallons of ethyl alcohol of 10 pounds of any of the following:

Methyl salicylate, U.S.P.
Oil of wintergreen, U.S.P.
Oil of cassia, U.S.P.
Oil of cloves, U.S.P.
Oil of peppermint, U.S.P.

and also of 5 gallons of a water solution of 60 ounces of zinc chloride, U.S.P. The oil is first dissolved in the alcohol, and then the zinc chloride solution added.

This formula is authorized for use as a solvent in manufacturing:

Touth paste and tooth powder
Mouth washes
External pharmaceuticals not U.S.P. or N.F.

S.D. 38A is prepared by adding to 100 gallons of ethyl alcohol:

5 ounces menthol crystals, U.S.P.
9 ounces emetine hydrochloride, U.S.P.
16 pounds benzoic acid, U.S.P.

This formula has only a single authorized application, as a solvent in the manufacture of mouth washes.

Uses of S.D. 38C

S.D. Alcohol 38C is prepared by adding to 100 gallons of ethyl alcohol 160 ounces of menthol, U.S.P., and 1.25 gallons of formaldehyde, U.S.P., containing 37% formaldehyde.

S.D. 38C is authorized for use as a solvent in manufacturing: face and hand lotions; tooth paste and tooth powder; and mouth washes.

S.D. Alcohol 38D makes use of the same denaturants as 38C, but in different proportions. According to the authorized composition for this formula, to each 100 gallons of ethyl alcohol are added 40 ounces of menthol, U.S.P., and 2½ gallons of formaldehyde, U.S.P., containing 37% formaldehyde. This formula is authorized only for use in manufacturing mouth washes.

S.D. Alcohol 38E

This formula also is authorized for use only as a solvent in the manufacture of mouth washes. It is prepared by adding to 100 gallons of ethyl alcohol either: (1) 5 gallons of fluid extract ipecac, U.S.P.; or (2) 40 pounds of ipecac, U.S.P.

All of these formulas of S.D. Alcohol are shipped in the following containers:

50-gallon wood barrels
5-gallon glass carboys
1-gallon glass bottles

It may be noted that these formulas offer considerable latitude to the manufacturer of mouth washes, an application for which they are all authorized. Other formulas authorized for use in this application include S.D. 38B, which was discussed in detail in the June issue of U.S.I. Alcohol News, and 37 and 37A, which will be discussed next month.

(The term *authorized uses* refers to applications for which formulas may normally be used under regulations of the Alcohol Tax Unit. Mandatory priorities now in effect may limit the quantities of alcohol available for certain of its authorized uses.)

HERE AND THERE

With the announcement that bentonite is to be admitted to U.S. Pharmacopoeia XII, increased interest is expected to be centered on this clay-like material. Another factor of interest is bentonite's availability from domestic sources.

Outstanding property of bentonite is its affinity for water, and this characteristic has led to many applications in pharmaceuticals and cosmetics. Medically, bentonite is regarded as safe for internal application. More commonly, however, it is employed in the manufacture of salves, ointments, and pastes, which are free from undesirable greasiness. Its beneficial effects in these preparations is considered to be largely the result of its colloidal properties. Bentonite is being successfully used also in soaps, where it apparently increases lathering properties.

One of the chief problems involved in the use of the bentonite is the preparation of the suspensions in which it is commonly utilized. It has been found that the bentonite can be dispersed more readily by first mixing it with alcohol and then adding water to form a gel, than by directly mixing it with water alone.

Essential Oil Sources

Government experts are continuing their search for new sources of essential oils, to replace the European supplies now largely cut off. Recent reports indicate that the Philippines are among the potential sources. Two plants grown there yield oils which resemble bergamot and jasmine — two of the most extensively used of all essential oils for the manufacture of perfumes and other cosmetic products.

Another suggestion that is receiving attention is that efforts be made to grow more roses in the United States as a source of essential oils.

Glycerine-Pitch Treatment

Recovery of commercially useful products from glycerine-pitch — the residue from glycerine distillation — is the subject of a recent foreign patent. The glycerine-pitch is diluted with water and neutralized, after which it is adsorbed on sawdust of silica and dried. It is then extracted with an organic solvent, such as acetone or ethyl acetate, and the solvent is vaporized. The process is said to permit recovery of di- and polyglycerols.

U.S.I. INDUSTRIAL CHEMICALS, INC.
60 EAST 42ND ST., N.Y. BRANCHES IN ALL PRINCIPAL CITIES
A SUBSIDIARY OF U. S. INDUSTRIAL ALCOHOL CO.

ALCOHOLS
Amyl Alcohol
Butanol (Normal Butyl Alcohol)
Fusel Oil—Refined
Methanol

Ethanol (Ethyl Alcohol)
Specially Denatured—All regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof, C.P. 96%, Absolute
U.S.I. Denatured Alcohol Anti-freeze
*Super Pyro Anti-freeze
*Solox Proprietary Solvent
*Solox D-I De-icing Fluid

*ANSOLS
Ansol M
Ansol PR

ACETIC ESTERS
Amyl Acetate
Butyl Acetate
Ethyl Acetate

OXALIC ESTERS
Butyl Oxalate
Ethyl Oxalate

PHTHALIC ESTERS
Amyl Phthalate
Butyl Phthalate
Ethyl Phthalate
*Registered Trade Mark

PROPIONIC ESTERS
Amyl Propionate
Butyl Propionate

OTHER ESTERS
*Diatol
Ethyl Carbonate
Ethyl Chloroformate
Ethyl Formate
Ethyl Lactate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Sodium Oxalacetate

ETHERS
Ethyl Ether
Ethyl Ether Absolute—A.C.S.

OTHER PRODUCTS
Acetone
*BK-5
Collodions
*Curbay B-G
*Curbay Binders
*Curbay X (Powder)
Derex
Ethylene
Ethylene Glycol
*Indalone
Methyl Acetone
Nitrocellulose Solutions
Potash, Agricultural
Urethan
*Vacatone

Foragers Annual Banquet

The Foragers of America, the oldest organization of toilet goods salesmen in the United States, will hold its 44th annual banquet on Saturday, January 10, at the Midston House, 38th St. and Madison Ave., New York. H. T. Georgi, president, and Walter Conklin, vice-president, and the entertainment committee, have made arrangements for an interesting evening. Oscar H. Betz, has been chosen as the guest of honor.

SOCMA Annual Meeting

The Synthetic Organic Chemical Manufacturers' Association held its twentieth annual meeting at the Chemists' Club, New York, December 9. There was a meeting of the board at 4.30 and an executive business meeting at 5. Cocktails and an informal dinner followed. Strickland Gillilan spoke on "The Low-Down on Washington Higher-Ups." Charles A. Mac, secretary of the association, was in charge of the arrangements.

Chicago Perfumery Assn. Lunch

The Chicago Perfumery, Soap & Extract Association held a regular luncheon meeting November 4 at the Sherman Hotel. The Santa Fe Railroad's latest film release showing the Carlsbad Caverns of New Mexico in Technicolor was shown.

People

Williams Brothers Honored

Dr. Robert R. Williams, chemical director of the Bell Telephone Laboratories of New York, and his brother, Prof. Roger J. Williams of the University of Texas, have been selected to receive the Charles Frederick Chandler medal of Columbia University.

Dr. Robert R. Williams has been cited for his isolation of Vitamin B-1 and for his contributions to the eludication of its chemical structure and synthesis. Prof. Roger J. Williams has been cited for his discovery of pantothenic acid, powerful regulator of growth, popularly known as the "acid of life," and for his contributions to the knowledge of the Vitamin B complex.

The presentation of the medals will take place at Columbia University in February. Each of the recipients will deliver an address.

Perkin Medal to Dr. Ittner

Dr. Martin H. Ittner has been elected to receive the Perkin Medal of the Society of Chemical Industry for 1942. The medal is awarded annually for outstanding work in applied chemistry, and the medallist is selected by a committee representing the five chemical societies of the United States.

Dr. Ittner was born in Berlin Heights, Ohio, May 2, 1870. He received a B.A. degree from Washington University in 1892, and after two years' additional work there received a B.S. degree. In 1895 he received an M.A. and in 1896 a Ph.D. from Harvard Graduate School. In 1930 Colgate University conferred on him an honorary Ph.D. degree and in 1936 he received an L.L.D. from Washington University.

For almost forty-five years Dr. Ittner has been in charge of research at Colgate-Palmolive-Peet Co. or predecessor companies. He developed a successful commercial process for the hydrogenation of fatty oils, on which he has been granted a number of patents. He has also made valuable contributions in the field of distillation and he holds several recent patents pertaining to new processes for glycerine production.

The medal will be presented to Dr. Ittner January 9 at a meeting at the Chemists' Club, New York.

Dr. Gathercoal Retires

Dr. E. N. Gathercoal, chairman of the revision committee for the National Formulary VI, has retired from the faculty of the University of Illinois College of Pharmacy. He retires as professor emeritus of pharmacognosy after 33 years service.

He is moving to his 60-acre farm near Pentwater, Mich. where he expects to continue research on drug standardization in connection with cultivation of of plants and preparation of drugs.

Burkland in Brazil

Edgar R. Burkland, formerly employed by the United States Department of Agriculture in Washington as associate agricultural economist in the Office of Foreign Agricultural Relations, has been sent to Brazil by the State Department. He is attached to the American Embassy in Rio de Janerio as Senior Agricultural Analyst and will devote himself primarily to investigations of complementary agricultural products in the tropical region of the country including rubber, fibers, drug and medicinal plants, essential oil plants, etc.

Companies

Jergens Appeals from FTC

Jergens-Woodbury Sales Corp. has asked the U. S. Circuit Court of Appeals in Cincinnati to review the Federal Trade Commission's order prohibiting it from representing that benefits resulted from the use of Vitamin D in creams or soap. Jergens-Woodbury contends that the Commission's findings were not in the public interest; that the Commission lacked jurisdiction and that the company was not given a fair hearing.

Pond's Appeals from FTC

A petition has been filed with the Circuit Court in New York by Pond's Extract Co., appealing the cease and desist order issued against the company by the Federal Trade Commission. The Commission ruled against Pond's claims that the use of Vitamin A in creams is beneficial to the skin on the grounds that application of Vitamin A to the skin would have only a systemic effect and no local effect. Pond's claims that the cease and desist order was beyond the power of the Commission and supported by insufficient evidence.

It is the company's contention that the evidence of its expert witnesses was supplanted by the opinion of the Commission as laymen and that the Commission failed to prove that application of Vitamin A to the skin would not be beneficial. Pond's petition stated that "the standard so set up by the Commission in thus limiting the effect of professional medical opinion is a wholly improper and unauthorized one, because it would result in disregarding as wholly unscientific many therapeutic measures and treatments recommended and given by the medical profession."

Biddle, Sawyer & Co. (U.S.A.)

A new company, Biddle, Sawyer & Co. (U.S.A.), Ltd., has been established at 100 Gold St., New York, to act as a purchasing agent for Biddle, Sawyer & Co., London. It is expected that many shipments which hitherto had to be cleared through the London office can in this way be expedited.

ACETYL ACETONE
p-ACETYL AMINOPHENOL
ALLOXAN
ALLOXANTIN
ALLYL ALCOHOL
ALLYL AMINE
ALLYL BROMIDE
ALLYL CHLORIDE
ALLYL THIOUREA (THIOSINAMINE)
ALUMINUM ISO PROPYLATE
AMINOACETAL
p-AMINOPHENOL SULFATE
AMMONIUM THIOCYANATE
BUTYL BROMIDE
CETYL BROMIDE
CETYL CHLORIDE
DECAMETHYLENE BROMIDE
DECAMETHYLENE GLYCOL
DIACETYL AMINOAZOTOLUENE (DIMAZON)
DIALLYL SULFIDE
DIMETHYL AMINO AZOBENZENE (METHYL YELLOW)
ETHYL IODIDE
METHYL IODIDE
NITRANILIC ACID
NITROSO BETA NAPHTHOL
PARABANIC ACID
o-PHENYLENE DIAMINE
PHENYL MERCURIC ACETATE
PHENYL MERCURIC HYDROXIDE
PHENYL MERCURIC NAPHTHENATE
PHENYL MERCURIC NITRATE
PHENYL ISO THIOCYANATE
PHENYL SEMICARBAZIDE
PHLOROGLUCINOL
PHTHALONIC ACID

Have You

RAW MATERIAL TROUBLES?

Many companies, which formerly depended on foreign sources for pharmaceutical intermediates, are now having difficulty locating domestic sources of supply or suitable substitutes.

If this is your problem, too, perhaps Edwal can help you.

SPECIAL CHEMICALS

Edwal is not only equipped to supply regularly the chemicals listed here, but is also well-qualified as to experience and facilities to prepare SPECIAL CHEMICALS to order. For complete information on these intermediates or special chemicals, write—

MANUFACTURING DIVISION

The **EDWAL** LABORATORIES, *Inc.*

PROPIONYL ACETONE
QUININE BISMUTH IODIDE
SEMICARBAZIDE HYDROCHLORIDE
SODIUM BISMUTH IODIDE
SODIUM CYANATE
URIC ACID

732 FEDERAL ST.
CHICAGO, ILL.

M M & R Dines Press

Magnus, Mabee & Reynard, Inc. tendered a dinner party at the Hotel Astor, November 12th to publishers, editors and advertising representatives of leading national and sectional trade journals.

J. B. Magnus, MM&R vice-president arrived by plane from Jacksonville just before dinner time to welcome the gathering in behalf of his associates. "This custom of dining the gentlemen of the Fourth Estate," said Mr. Magnus, "provides an opportunity to meet and break bread with the men whose publications represent the many industries that are users of essential oils."

Percy C. Magnus, spoke of the trying times facing American manufacturers. "There are," said Mr. Magnus, "shortages of many essential oils but American ingenuity will and is finding replacements for such products. The 'Made in U. S. A.' label is gaining importance and what is more, this label today identifies many perfume and flavor oils produced as substitutes but which are so good that I doubt that there will be much need for originals when conditions make them available again. MM&R is grateful to the press for its aid in joining in the common need to lick the tough situation which confronts us all."

Discussing MM&R advertising plans for 1942, Sidney M. Weiss, vice-president of A. W. Lewin Co. Inc. MM&R advertising agents said "MM&R is going to advertise more extensively in 1942 despite the shortages and a booming sellers' market. MM&R has a job to perform, important news to place before the many industries that use essential oils. The shortest, the least expensive, the best way to present the facts," said Mr. Weiss, "is through the medium of advertising in the trade press."

Matchabelli Wins Suit

A suit brought by Prince Matchabelli, Inc., against Anhalt & Co., Inc., has been settled in United States District Court, Southern District of New York. A judgment, signed by U. S. District Judge Alfred C. Coxe, upheld Matchabelli's patent on its purse kit and its right to protect the individual style and design it had developed. Anhalt & Co. was ordered to cease making and distributing its imitations, and to turn over all existing stocks of the goods to Matchabelli.

Anhalt & Co. was further enjoined from "representing in any manner whatsoever directly or indirectly within the State of New York or elsewhere, that any of its products are products of the plaintiff or sponsored by the plaintiff, or are the plaintiff's product, and from making any representations or doing any acts calculated to or likely to lead the public and buyers and consumers of said article to believe that any product of the defendant's is manufactured or produced or sponsored by the plaintiff or is an article manufactured or produced or sponsored by the plaintiff."

Brewster Joins Westmore

Ray C. Brewster, for the past ten years with E. R. Squibb & Sons, has been appointed general sales manager of House of Westmore, Inc. He will make his headquarters at the company's New York office.

Mr. Brewster was divisional sales manager in several divisions for Squibb and was later made sales manager of Squibb's home necessities department. Prior to that he was sales manager of Lentheric, and before that was for six years manager of the dealer sales department of Canada Dry Ginger Ale, Inc.

McKesson Changes

McKesson & Robbins has named T. O. Duff, Chattanooga, regional vice-president in charge of the south central district. He will assume the new position January 1, replacing J. L. Bedsole of Mobile, Ala., who has given up the post for reasons of health. Mr. Bedsole will remain as vice-president and head of the McKesson wholesale house at Mobile and will continue as a director of the company.

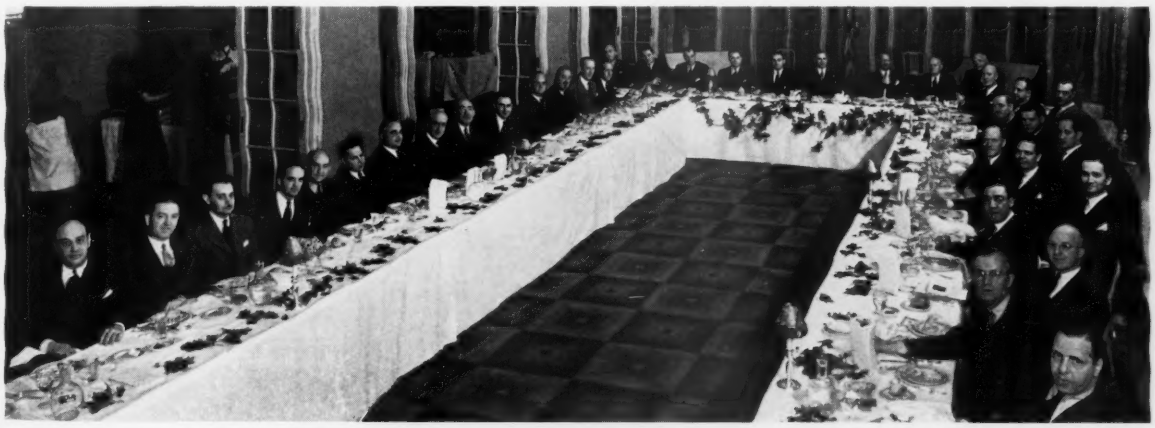
A. B. Benson, manager of the company's Boston branch, becomes regional vice-president for the New England district January 1. He succeeds George Van Gorder who will assume executive duties at the New York office. Mr. Van Gorder will continue as regional vice-president of the New York Metropolitan district.

Standard Synthetics in Frisco

Standard Synthetics, Inc., New York, has opened an office and warehouse at 433 South Van Ness Ave., San Francisco, under the direction of F. D. Lyon who represents the company in San Francisco, Los Angeles and Seattle.

J. B. Hindle, vice-president, returned November 1 from a trip to the west coast where he spent several days with Mr. Lyon calling on the trade in San Francisco and Oakland. On his way west he visited the Chicago office of the company at 219 East North Water St. which is in charge of E. M. Sinclair and E. S. Schumm and in Kansas City he saw Richard Remus, manager of the Kansas City office.

Increased business recently made it necessary for Standard Synthetics, Inc. to increase its warehouse space in New York threefold.



MAGNUS, MABEE & REYNARD PRESS DINNER

LEADERSHIP

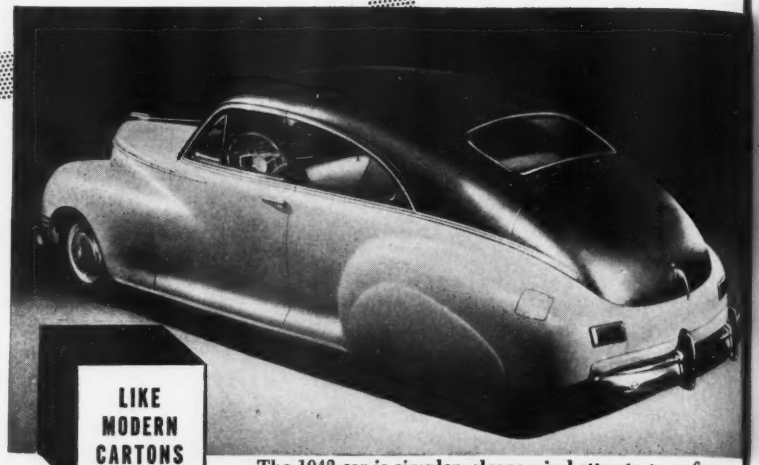
-IN PACKAGE PROGRESS TOMORROW

. . . DEPENDS ON SIMPLER STANDARDS AND CARTON SAVINGS TODAY

Not all good folding cartons set the style pace . . . but package leaders in good taste are most often product leaders in progressive marketing and production.

Ridgelo clay coated boxboard is picked for these leaders just as careful workmanship, efficient methods, high standards of materials are considered necessary in the product. It does the job best and easiest.

There is less waste in Ridgelo clay coated cartons . . . less ink in printing them, fastest production in getting them out. The guess work and gamble of variable materials are gone. Your boxmaker knows what this means. And so should you. Remember to ask for proofs on Ridgelo clay coated boxboard in planning tomorrow's cartons.



. . . The 1942 car is simpler, cleaner, in better taste—a finer car to drive and keep.

. . . Less waste here, with a single proven method and standardized materials.

A RIGID STANDARD — ECONOMY TOO

A quality that rates tops today is uniformity. The closer that standards are maintained the more certain results become with low waste and high economy. Ridgelo clay coated products are leaders in tests that set these standards.

	RIDGELO CLAY COATED	GRADE 2	GRADE 3
Break Test	8	7	6
Color	10	9	6
Surface Smoothness	10	8	7
Rigidity	10	9	7
Tensile Strength	8	8	9
Absorption (Low is desirable)	5	8	7

★ Ridgelo CLAY COATED ★

BOXBOARDS • CARDBOARDS

MADE AT RIDGEFIELD, N. J., BY LOWE PAPER COMPANY

Representatives: E. C. Collins, Baltimore • Bradner Smith and Company and Mac Sim Bar Paper Company, Chicago • H. B. Royce, Detroit
Gordon Murphy and Norman A. Buist, Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Son, Inc., Philadelphia

Storfer Acquires Quinlan

On November 5, Benson Storfer, president of Parfums Corday, Inc., New York, bought out the interests of Kathleen Mary Quinlan, Inc., with salon at 655 Fifth Ave., New York, executive offices at 60 Hudson St., New York, and factory at Clinton, Conn. Benson Storfer is president of the corporation and the late Paul Strashun was to have been vice-president in charge of sales. Kathleen Mary Quinlan founded the company bearing her name over twenty years ago as a stylist in beauty, and rapidly achieved national prominence in that field. Kathleen Mary Quinlan will be operated as a separate corporation, and there will be no important changes of policy or distribution.

Abbott Adds Scientists

Dr. E. H. Volwiler, director of research for Abbott Laboratories, North Chicago, Ill., has announced several additions to the research staff and control laboratories. The nutritional research department has added D. M. Hogsted, Ph.D., University of Wisconsin; the organic research department, H. E. Zaugg, Ph.D., University of Minnesota; and the biochemical research department J. R. Schenck, Ph.D., Cornell University.

Recently affiliated with the staff of the control laboratories were Lester Feiertag, M.S., University of Wisconsin; Everett Doede, B.A., University of Chicago; and Ralph Cox, Illinois Wesleyan University.

Appley Joins Vick

Lawrence A. Appley has resigned as educational director of Socony-Vacuum Oil Co. to become a vice-president of Vick Chemical Co. where he will have charge of personnel planning and research. Mr. Appley who is aide to Secretary of War Stimson in developing civilian organization of the Army will continue to devote part of his time to national defense.

Henderson to OPM

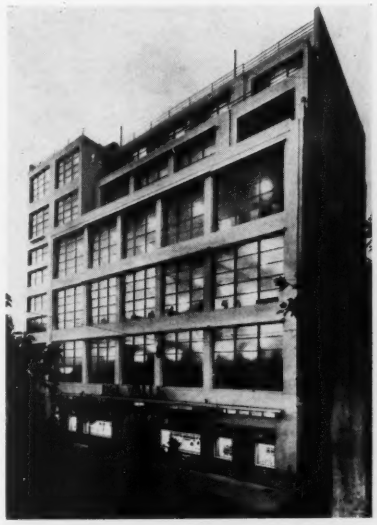
George T. Henderson, director of the package laboratory of The Hinde & Dauch Paper Co., has been appointed assistant to the head of the Container Branch of OPM. Mr. Henderson who has been with Hinde & Dauch for the past six years has been granted a leave of absence for the duration of the emergency and will return upon completion of his work in Washington.

Abbott Fellowships

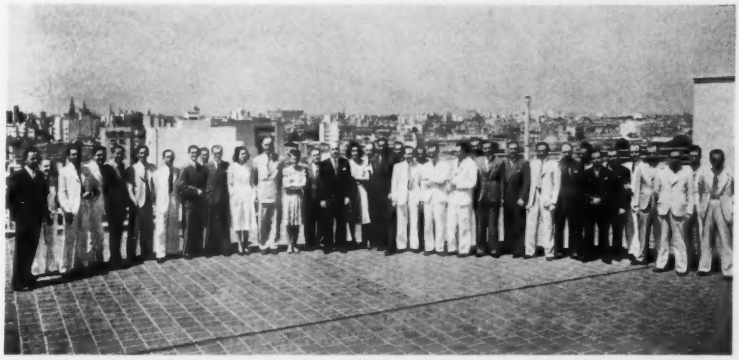
Several fellowships for the year 1941-42 have been made available by Abbott Laboratories to students in the last year and next to last year of graduate work leading to the doctor's degree. The fellowships carry stipends of $650 and grants in organic chemistry have been made to the universities of Illinois, Michigan, Ohio State, Pennsylvania State, and Purdue. Grants in biochemistry have been made at Columbia and Cornell.

Borden Buys Fish Company

The Borden Co. has purchased the Farallone Packing Co., San Francisco and Vancouver, packers of canned fish and dealers in fish livers for vitamins. The Borden Co. recently created the Borden Vitamin Co. Division under the direction of Harry McNeilly, vice-president and general manager. Charles F. Kieser is president of the new division.



Shown at the right is the manufacturing laboratory of Del Valle, Ltda., Buenos Aires, Argentina, producers of medicinal products, perfumes, and cosmetics. Directly below is shown the sales staff of the company and at the bottom is shown the manufacturing staff. The company has five hundred employees, some of whom have a perfect knowledge of this country.



Sturge Standard

PRECIPITATED

Chalk

Specific grades to meet your requirements for

DENTIFRICES
FACE POWDER
ROUGE
TABLETS

For over fifty years American chemists and drug and cosmetic manufacturers have learned by experience that they can depend on STURGE STANDARD PRECIPITATED CHALK for *Unfailing Uniformity, Unfailing Quality and Unfailing Deliveries.*

JOHN & E. STURGE
Limited

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H. J. BAKER & BRO.
271 Madison Ave. • New York, N. Y.

J. W. Dart Joins United Drug

Joseph A. Galvin, president of United Drug, Inc., has announced that Justin W. Dart, formerly general manager of the Walgreen Co., has joined the management group of United Drug. Mr. Dart will work with executives and directors of the company in making a general study of the business.

Tombarel Products Moves

Tombarel Products Corporation is moving this month to new quarters at 12 East 22nd st., New York, according to an announcement by L. J. Zollinger, president of the firm. After five years at their present location, the company is expanding its facilities. The company is moving to a modern building with increased floor space so that greater laboratory facilities can be installed and more storage space be available.

Industrial Minerals Co.

The Industrial Minerals Company of Newfoundland, Ltd., is now located at 9 Rockefeller Plaza, New York, according to John G. Harrison, sales director. This company was formed by the Canadian American Co. to develop the large talc and other non-metallic mineral deposits controlled in Newfoundland. A processing plant is now under construction.

The Clinchfield Sand & Feldspar Corporation, formerly located at 331 Madison Ave., is now also located at 9 Rockefeller Plaza.

Merrill Joins Hopkins

J. L. Hopkins & Company, New York, announce the appointment of Bernard G. Merrill as Assistant to the President and Director of Sales. Mr. Merrill, for many years with George W. Luft & Company, is widely known to the drug, cosmetic and allied industries.

Wilson Labs. Names Lloyd in N. Y.

Wilson Laboratories has announced that Lyman S. Lloyd, who has represented the company in Philadelphia for many years, has been appointed the Wilson Laboratories representative for the New York area.

Colombia Firm Wants Agency

Simon Preminger & Co., Apartado Postal No. 2012, Bogota, Colombia, is interested in representing an American firm which sells drugs or raw materials for the pharmaceutical, cosmetic and chemical industries.

Abbott Wins Ad Award

An award in the Direct Mail Leaders Contest for 1941 conducted by the Direct Mail Advertising Association was won by Abbott Laboratories, North Chicago, Ill.

This award, the sixth to have been won by Abbott, was made on its mailing campaign for the first six months of 1941, called "Let's Go, America!", addressed to physicians in the United States in an effort to direct prescription business to pharmacies.

The award was accepted at the convention of the Direct Mail Advertising Association in Montreal, by R. Messier, advertising manager of Abbott Laboratories, Ltd., Montreal, in the absence of Charles S. Downs, general advertising manager for the company.

Naugatuck Aromatics to Move

Maurice G. Couderchet, manager of Naugatuck Aromatics, Division of United States Rubber Co., has announced that its New York offices will be moved December 20, 1941, to 254 Fourth Ave., where it will occupy the eleventh floor of the building situated at the corner of 20th St.

The perfume compound laboratories will also be moved to the new location and certain stocks of bulk materials will be carried there. The telephone number remains the same—GRamercy 7-7822.

The Naugatuck Aromatics plant is situated at Naugatuck, Conn., and there is a branch office at 215 West Ohio St., Chicago.

Swindell Honors Dunnock

A testimonial dinner in honor of John L. Dunnock, celebrating his fifty years of service with Swindell Brothers, Inc., was held at the Belvedere Hotel, Baltimore, November 25. Mr. Dunnock, who has been associated with the company since 1891, was presented with a gold watch appropriately inscribed.

Armstrong Cork Changes

The resignation of John J. Evans, Sr., as a member of the board of directors of Armstrong Cork Co., and the election of Joseph C. Feagley to succeed him as a member of the board has been announced by H. W. Prentis, Jr., president of the company. At the same time Mr. Prentis announced the appointment of W. D. Martz as assistant treasurer.

Mr. Evans' resignation follows fifty-seven years of association with the company, fifty of which were spent in active service. He served as president of the company from 1929 to 1934 when he resigned to become chairman of the board, a position he filled until his resignation in 1939.

Mr. Feagley has been with Armstrong for twenty-six years and since 1939 has been vice-president and general manager of the glass and closure division.

Mr. Martz, who joined the company in 1925, has been associated with the treasurer's office since 1940.

J. B. Scott and R. H. Swindell Named Directors

At the annual meeting of the stockholders of Swindell Brothers, Inc., held September 16, Joseph B. Scott, general sales manager, and Robert H. Swindell, secretary of the company, were elected members of the board of directors.

Cutting Appointed Sales Manager

Joseph Keho, president of Dorothy Gray, Ltd., New York, has announced that Harold B. Cutting, who has had many years of sales executive experience in the cosmetic field, has been appointed sales manager of the Dorothy Gray organization.

Heyden to Build

Contracts for the construction of a one-story brick and steel addition to its plant in Garfield, N. J., have been awarded by Heyden Chemical Corp. The new unit will be 40 by 60 feet and will cost with equipment approximately $40,000.

New Roure-Dupont Office

Roure-Dupont, Inc., has opened new offices at 366 Madison Ave., New York. The telephone is VAnderbilt 6-5830. The company's laboratories and warehouse will remain at 353 Fourth Ave., that city.

Glyco Appoints Sager in Phila.

David Sager has been appointed technical representative of Glyco Products Co., Inc., in Philadelphia. In his new work, Mr. Sager, who is a graduate of Franklin Marshall College, and was subsequently employed as chief chemist for the Volcocite Co., will be associated with Leonard S. Levitt, sales manager of the Philadelphia office of Glyco.

Gammon Advanced by Weeks & Leo

Harold E. Gammon has been made executive vice-president of Weeks & Leo Co., Inc., Des Moines. Mr. Gammon has been employed by Weeks & Leo in an executive capacity for over fifteen years.

Ushkow Joins Endo

Endo Products, Inc., Richmond Hill, N. Y., has announced that Meyer Ushkow, attorney, has left his practice of law to join the company. He will aid in the organization of a new special detail department.

American Can in Washington

The American Can Co. has opened a new office in the Washington Building, Washington. The office will be in charge of A. N. Webb who will keep in touch with the defense program as it affects the company.

Schering Purchase Denied

An application to purchase the Schering Corp., Bloomfield, N. J., made by a group consisting primarily of company employees, has been denied by the Treasury Department.

Buffalo Eno Plant Sold

The Buffalo, N. Y., plant of J. C. Eno Ltd. which has been idle since the company's operations were concentrated at Bloomfield, N. J., about nine months ago, has been sold to an electrical equipment firm.

Dealy Speaks on Filter

A filtration unit particularly designed for the removal of pyrogen from infusion fluids used in the treatment of clinical cases—one of the latest developments of the research department of the Ertel Engineering Corp., Kingston, N. Y.,—was described by Francis X. Dealey at the Rotary Club luncheon in that city. Fred Ertel, program chairman, introduced the speaker.

The filtration unit is now in use in one of the largest hospitals in the city of New York. In contrast to the many inventions and the continued research for instruments of death and torture, the filtration unit is produced to help save lives by scientifically removing pyrogen (a fever producing substance) from the infusion fluids (dextros and saline solutions).

Mr. Dealey told of the collaboration with scientific research groups which resulted in the unit and the many experiments proving its feasibility and adaptability.

Despite the technical character of his subject, the speaker had no difficulty in delivering a clear, concise and comprehensive talk, which was greatly appreciated.

Financial

Abbott Stock Offering

Abbott Laboratories has filed with the Securities and Exchange Commission a registration statement covering the proposed issue of 30,000 shares of 4 per cent. preferred stock, $100 par. The proceeds will be used in part to redeem the outstanding 4½ per cent. convertible preferred stock which was issued in 1937, in so far as holders of that stock do not exercise conversion rights, and the balance will be applied to capital expenditures and increase of working capital.

Merck Stock Offering

Merck & Co., Inc., Rahway, N. J., filed on December 1 a registration statement covering sale of 53,690 shares of 4½ cumulative preferred stock of $100 par value and 30,000 shares of common stock of $1 par value with the Securities & Exchange Commission.

The common stock is outstanding and 15,000 shares are to be sold by George W. Merck, president, and the remaining shares will be sold by the trustees of a trust for the benefit of Friedrike Merck.

Proceeds from the sale of the preferred stock will be applied to payment of a 1¾ per cent. serial bank loan of $3,000,000 and the balance will go into the company's general fund.

Stockholders of the company at a meeting at Rahway, December 3, voted on the plan and also voted on a proposal to reduce the dividend on the present preferred stock from 6 to 5¼ per cent. and raising the call price of this stock from $115 to $120 a share for a period of three years. The total authorized capital stock of the corporation, upon completion of the recapitalization, will consist of $4,631,000, 5¼ per cent., cumulative preferred; $5,369,000, 4½ per cent. cumulative preferred and 1,200,000 shares of $1 par value common stock.

The additional 4½ per cent. preferred stock will be redeemable at any time at the option of the directors at $108 a share if called prior to January 1, 1945 and at prices $1 a share less per annum until January 1, 1948. Thereafter the stock will be redeemable at $104 a share. The 5¼ per cent. and the 4½ per cent. preferred stocks have equal preference as to dividend and other rights.

American Cyanamid Net

American Cyanamid Co. reports for the nine months to September 30 a net income of $4,323,065 as against a net profit of $4,159,972 earned in the same period last year. The net income on the common stock after provision for Federal and foreign taxes, contingencies and dividends on preferred stock, was $4,002,494, against $3,984,427 last year.

Abbott Earnings Steady

Abbott Laboratories reports for the nine months to September 30 a net profit of $1,814,901, after $1,418,900 provision for Federal income and excess profits taxes. This is equal to $2.34 a common share and compares with revised net of $1,815,192, or $2.34 a common share in the first nine months of 1940, after provision of $772,763 for Federal taxes.

McK & R. Ltd. to Dissolve

Notice has been published in the Canada Gazette that McKesson & Robbins, Ltd., Montreal, will apply for permission to surrender its charter and dissolve.

Merck Reports Earnings

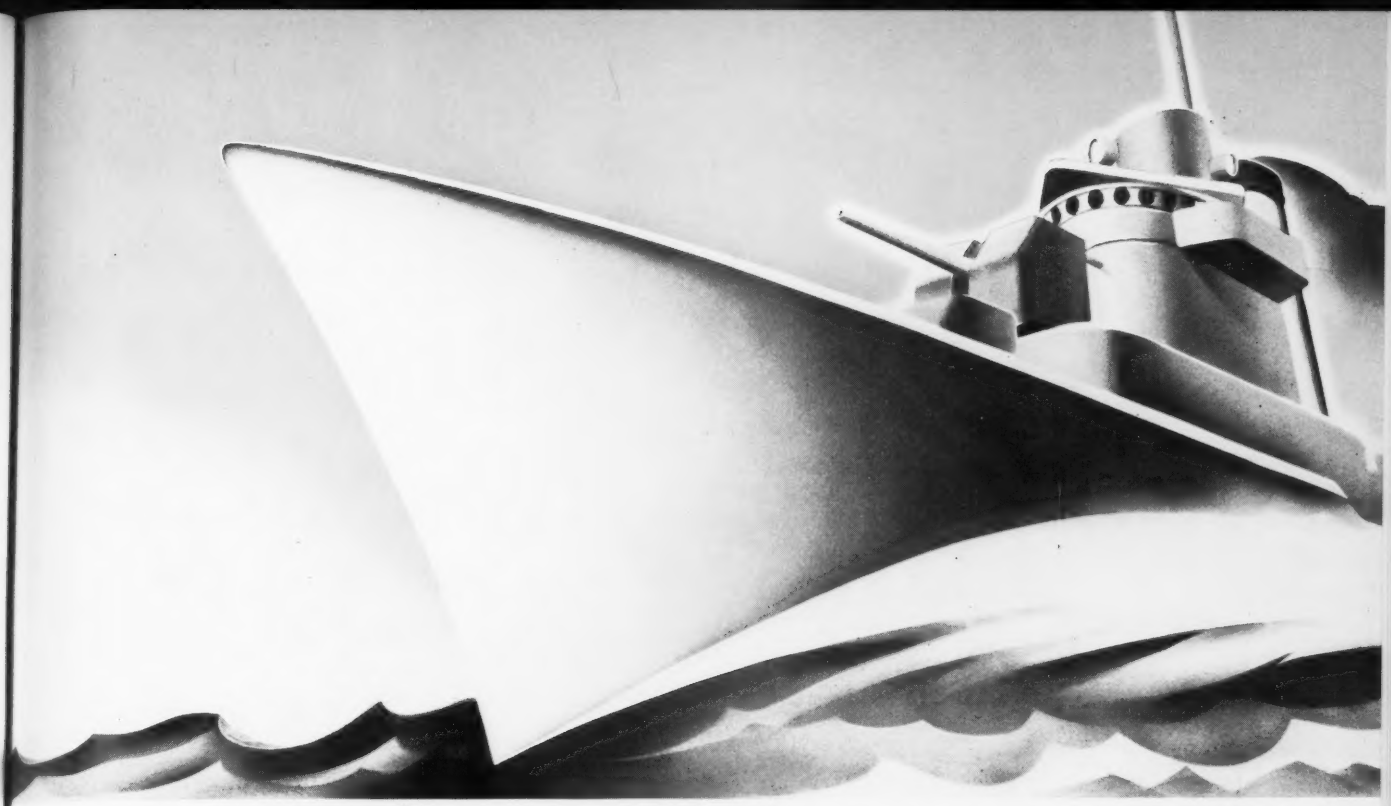
Merck & Co., Inc. reports for the nine months ended September 30 a net income of $2,439,888, after provision of $4,398,561 for income and excess profits taxes and after appropriation of $300,000 to reserve for contingencies-inventories. This is equivalent to $2.23 a common share.

United Drug Net Up Sharply

United Drug, Inc. reports for the first nine months of 1941 after all charges and Federal income taxes, a net profit of $1,293,913 compared with $96,234 for the corresponding period last year. These earnings are equal to 92 cents a share against 7 cents a share earned in the first nine months of 1940.

The company's earnings this year have not been subject to the excess profits tax, but normal Federal income taxes at existing rates required $541,791 for the nine months this year against $175,189 provided last year.

Consolidated net profit of the company for the third quarter, after all charges and Federal income taxes, amounted to $775,275 compared with adjusted net profit of $122,376 in the corresponding quarter last year.



FULL SPEED AHEAD . . . *with all stations manned!*

Cutting through ocean swells, a guardian of the seas sweeps full speed ahead to protect America's interests . . .

So, too, at the J. T. Baker Chemical Co., "all stations are manned" and production of fine chemicals moves full speed ahead to aid America in its National Emergency and to help protect America's health.

Baker moves not only with speed, but with accustomed *accuracy.* Purity by the ton in Fine Chemicals, established through Baker men and methods, is still being rigidly maintained. These high Baker standards aid National Defense. And these Baker standards also help pharmaceutical manufacturers maintain quality, and protect their precious trademarks.

Baker, in its two-fold job, is endeavoring to meet both normal and extraordinary demands; to serve both our own loyal customers and Uncle Sam.

Under today's national emergency, old customers may not always be able to get what they want when they want it. Uncle Sam gets the right of way, and rightfully so. But we are doing our utmost with all stations manned. We are going full speed ahead.

The name **Baker** *is known wherever Fine Chemicals are used*

A partial list of Tonnage Fine Chemicals held under rigid control, at no price premium.

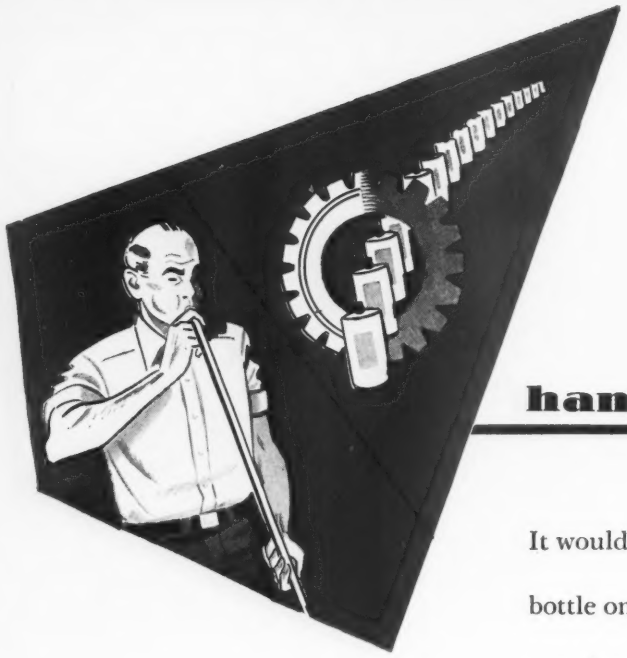
- Alkali Bromides
- Potassium Iodide
- Magnesium Oxide
- Magnesium Carbonate
- Cream of Tartar
- Bismuth Subcarbonate—Subnitrate and other Salts
- Caustic Potash and Soda Sticks and Pellets
- Rochelle Salt
- Lead Acetate
- Salicylates

Baker's

J. T. BAKER CHEMICAL CO., Phillipsburg, N.J.

NEW YORK: 420 Lexington Avenue · PHILADELPHIA: 220 South 16th Street · CHICAGO: 435 No. Michigan Avenue

Baker's fine chemicals

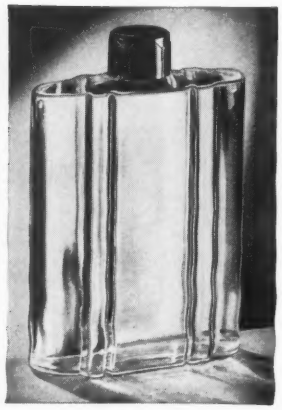


hands vs. gears

It would be as silly to produce an intricate and delicate perfume bottle on a machine as it would be to waste the talents of one of our glass craftsmen in blowing a bottle for furniture polish.

It's wasteful to insist on hand-made objects when machines can do the job as well—and it's equally wasteful to try to make a machine produce what it was not designed for. That's why Carr-Lowrey glass bottle service offers both hand blowing *and* machine production.

Carr-Lowrey customers can have whichever production method their particular package requires, whether it be for a cosmetic, drug, food or household specialty.



Stock Mold Bottle No. 404, product of "3-point" design and production service, is now available in these sizes:

½ Dram	½ oz.	4 oz.
1 Dram	1 oz.	6 oz.
2 Dram	2 oz.	8 oz.

CARR-LOWREY
3-Point Service

creates

1 PRACTICAL
2 ATTRACTIVE
3 ECONOMICAL
glass packages for foods, drugs, cosmetics, household products.

Carr-Lowrey Glass Co.

Factory and Main Office: BALTIMORE, MD.

New York Office: 500 Fifth Avenue — Chicago Office: 1502 Merchandise Mart

Du Pont Aromatics

FOR PERFUMES AND COSMETICS

Alcohol C-8
Alcohol C-10
Alcohol C-12
Alpine Violet
Amyl Salicylate
Anisic Alcohol
Anisic Aldehyde
(Aubepine Liquid)
Astrotone
Benzophenone
Benzyl Acetate
Benzyl Alcohol
Bergamot Artificial
Citral
Coumarin
Dimethyl Anthranilate
Dimethyl Hydroquinone
Geraniol

Geranium Artificial
Geranyl Acetate
Hydroxycitronellal
Indole
Iso Amyl Benzyl Ether
Isoborneol
Isobornyl Acetate
Methyl Anthranilate
Methyl Para Cresol
Methyl Rhodione
Mugol (Dimethyl Acetal of
Hydroxycitronellal)
Musks, Artificial
Rhodione
Skatole
Terpineol
Terpinyl Acetate

● **We welcome your inquiries for aromatic chemicals, including those listed above. The many Du Pont manufacturing facilities are constantly being expanded to provide a uniform high quality and a dependable source of supply. Why not standardize on Du Pont chemicals?**

DU PONT

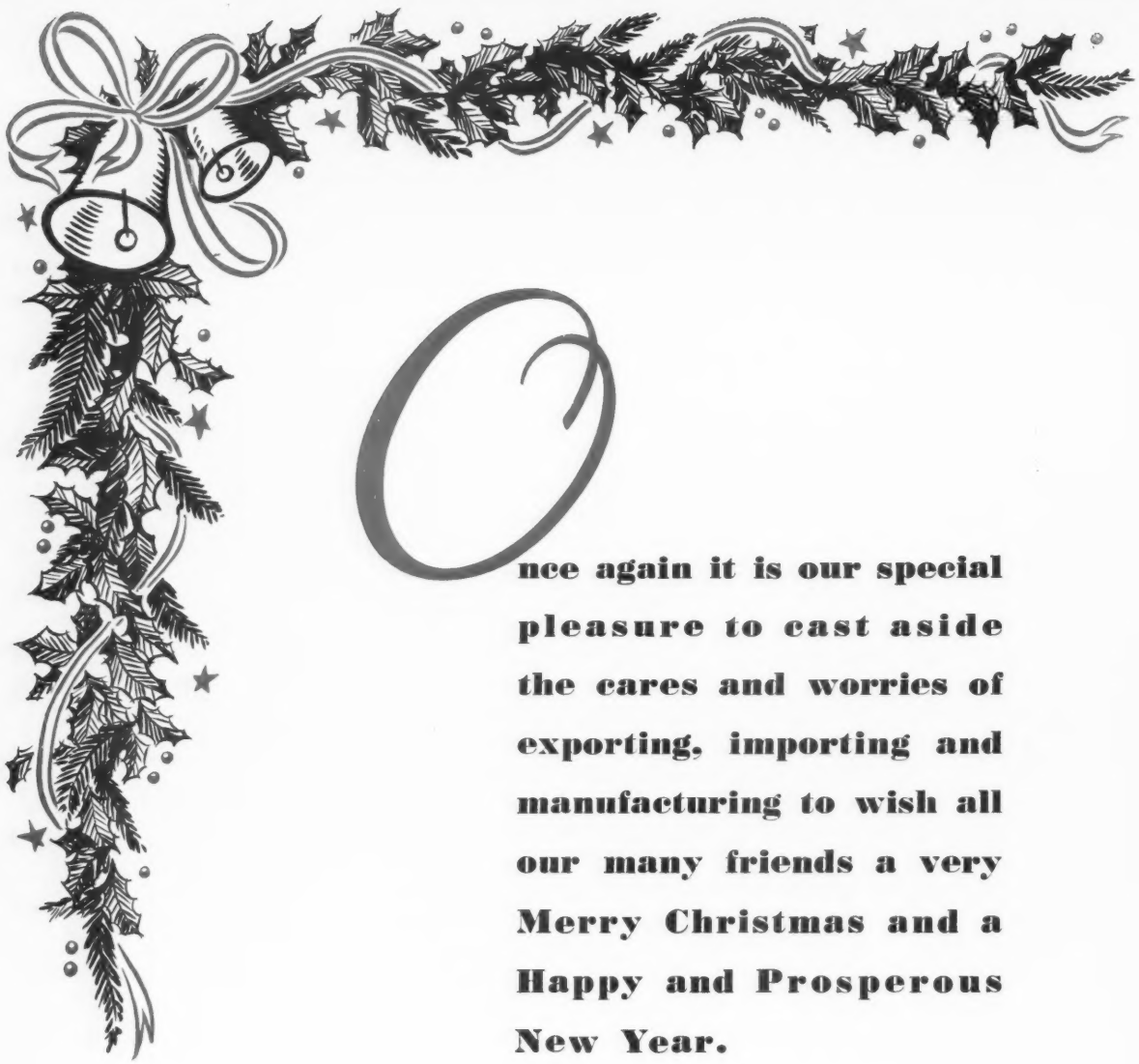
REG. U.S. PAT. OFF.

E. I. DU PONT DE NEMOURS & CO. (INC.)

ORGANIC CHEMICALS DEPARTMENT, FINE CHEMICALS DIVISION

WILMINGTON, DELAWARE

40 WORTH STREET, NEW YORK CITY — **7 SO. DEARBORN STREET, CHICAGO, ILL.**



Once again it is our special pleasure to cast aside the cares and worries of exporting, importing and manufacturing to wish all our many friends a very Merry Christmas and a Happy and Prosperous New Year.

ORBIS

PRODUCTS CORPORATION

215 PEARL STREET, NEW YORK · FACTORY & LABORATORY, NEWARK, N.J.

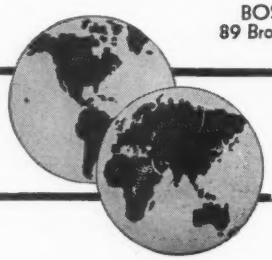
CHICAGO
831 N. Wabash Ave.

PHILADELPHIA
610 Brown Bldg.

BOSTON
89 Broad Street

MEMPHIS, TENN.
1620 Carr Ave.

Water Soluble Gums	Waxes	Cosmetic Raw Material	Fruit Flavors
Filter Paper	Stearic Acid	Oleo Resins	Food Colors
Aromatics	Essential Oils	Perfume Bases	Quince Seed
Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss



Vick Earnings Steady

Vick Chemical Co. reports for the quarter ended September 30 a net income of $1,082,468, equal to $1.58 a share after United States and foreign income and excess profits taxes of $793,683. This compares with $1,044,247, or $1.52 a share earned in the September quarter last year.

Receiver for Wilson Drug

Peyton G. Abbott has been appointed permanent receiver for Fred G. Wilson, trading as Wilson Drug Co., Winston-Salem, N. C., and has been authorized to conduct the business as "a going concern."

Walgreen Earns More

Walgreen Co. and subsidiaries report for the fiscal year ended with September a net profit of $3,334,835 after $1,555,000 provision for Federal income and excess profits taxes. This was equal to $2.25 each on 1,292,485 shares of common stock and compared with $3,149,541, or $2.10 a common share earned in the previous year when Federal income tax deductions amounted to $865,000.

Sales during the year ended with September were $82,514,794, an increase of $8,221,634 over the year before. During the year the company opened twenty stores and closed twenty-two.

Obituaries

James Mortimer Bush

James Mortimer Bush, chairman of the board of W. J. Bush & Co., Ltd., London, president of W. J. Bush & Co., Inc., and head of the company's subsidiaries in Canada, Australia and South Africa, died in London November 20. He was seventy-eight years old.

His association with the Bush organization began in 1880 and lasted until his death. The company, a large one when he joined it, expanded until it had representation throughout the world.

William Lee Bean

William Lee Bean, secretary-treasurer of McCormick & Co., Baltimore, died November 9 after an illness of several weeks. He was sixty-eight years old.

He joined the McCormick organization in February 1892 when it was a small organization and by his interest and ability was instrumental in building it into an organization of national prominence. When it was incorporated in 1915 Mr. Bean was made secretary-treasurer. He would have completed fifty years of service with the company in February, 1942.

Mr. Bean served two terms as president of the Baltimore Credit Men's Association and has been a regular delegate to the annual conventions of the National Association of Credit Men for many years, serving on some of its most important committees. He was also active in the Baltimore Drug Exchange.

Samuel H. Clark

Samuel H. Clark, president of Whittaker, Clark & Daniels, Inc., New York, wholesale dealers in chemicals, colors and pigments, died November 14 of a heart attack at his home in Maplewood, N. J. He was sixty-two years old.

SAMUEL H. CLARK

Mr. Clark, who was born in Newark, went to work for W. H. Whittaker Co., upon his graduation from high school. In 1916 he became president of the concern and two years later its name was changed to Whittaker, Clark & Daniels, Inc. He was also president of the Whittaker Micronizing Corp., New York, and the Reduction Engineering Corp., Newark, and was a director of the Fine Pigments Corp., Newark.

Mr. Clark was a former member of the executive committees of the National Association of Manufacturers and the Associated Industries of New York State. He was a member of the Paint, Oil and Varnish Association, Perfumers' Association of New York, Mineral Products' Association of America and the Toilet Goods' Association. He was active in Methodist Church affairs in Newark and Ocean Grove, N. J.

Dr. Robert Contrell

Dr. Robert Contrell, former medical director of the Seydel Chemical Co., Newark, N. J., died at his home in Englewood, N. J., November 26. He was sixty-eight years old. He retired in 1939 after serving as medical director of Seydel Chemical Co. for eight years.

J. A. Gray

J. A. Gray, treasurer of the Bickmore Co., Old Town, Me., died November 16.

H. Gordon MacKelcan

H. Gordon MacKelcan, secretary and vice-president of Innis, Speiden Co., New York, died November 15 at the Hartford Hospital where he was taken after suffering a cerebral hemorrhage while watching the football game between Wesleyan and Trinity. He was fifty-one years old. His son, Douglas, played right halfback on the Wesleyan team.

Mr. MacKelcan joined the Innis, Speiden organization in 1908 as a junior clerk. In 1922 he was made sales manager and in 1926 he was advanced to general sales manager and assistant secretary of the company and a member of the board of directors. In 1927 he was made vice-president in charge of sales and in 1937 he became secretary of the company.

Paul Strashun

Paul Strashun, vice-president of Parfums Corday, Inc., New York, died November 20 of a cerebral hemorrhage in his home at 20 Park Ave., New York. He was forty-five years old.

Mr. Strashun had been associated with Parfums Corday for the past six years, and was recently also made vice-president in Kathleen Mary Quinlan. Born in Kentucky, he moved to New York at an early age. In the World War, he was twice wounded and received a military citation. Upon his return, he was appointed to the U. S. Bureau of Investigation for six years. Served as deputy attorney general investigating election frauds in New York, and later was appointed confidential assistant to the Seabury Committee. He was Commander of the Fusioneers during the first La Guardia campaign and was subsequently appointed a Deputy Fire Marshall. In November 1939, he received the first passport given to an American citizen under the Neutrality Act, to fly to France.

NON-CONFORMISTS, KEEP OUT!

THERE'S one requirement you *must* have in every shipment of pharmaceuticals that enters your receiving room—*uniformity!*

And here's one excellent way to make *sure* you get that requirement in every shipment—look to Monsanto as your source of supply for pharmaceuticals!

Every batch of *every* Monsanto pharmaceutical is carefully checked against Monsanto's high standards at *every* important step in its manufacture.

For a complete list of Monsanto pharmaceuticals, their properties and uses, and for experienced technical advice, inquire: MONSANTO CHEMICAL COMPANY, St. Louis, U. S. A. District Offices: New York, Chicago, Boston, Detroit, Charlotte, Birmingham, Los Angeles, San Francisco, Montreal.

LET'S GO! U.S.A. KEEP 'EM FLYING!

MONSANTO CHEMICALS

SERVING INDUSTRY... WHICH SERVES MANKIND

F.T.C. ACTIVITIES

Price Fixing Stopped

Three Washington, D. C., jobbers and distributors of beauty parlor and barber supplies, and a New York manufacturer have been ordered to cease further agreement, combination and conspiracy to restrain competition and fix prices in their products.

The respondents are: Union Beauty & Barber Supply, Inc., Louis Saul and Anthony Nicastri, trading as A. B. C. Barber & Beauty Supply Company, Vasili Thalis, trading as American Beauty & Barber Supply Company, all of Washington; AR. Winarick, Inc., New York, and Joseph A. Gallagher, general sales manager of AR. Winarick, Inc.; George Miller, E. D. Chapman, Frank Waters and Gladys Welch, officers of the Union Beauty & Barber Supply, Inc.

The findings are that the Washington respondents are jobbers doing more than $400,000 worth of the approximately $420,000 a year business in these supplies in the District of Columbia and nearby points in Maryland and Virginia.

In 1939, following complaints of the chaotic condition of the industry, a dinner was held in Washington attended by most of the respondents or their representatives upon the invitation of Joseph A. Gallagher.

Evidence presented at the Commission's hearing in this proceeding indicated that the respondents discussed these conditions and that Gallagher urged that the jobbers sell at one price, that no discounts be given in excess of ten per cent. and that gradually all discounts be eliminated.

Louis Sciscent, a Washington jobber, was primarily responsible for the price cutting complained about by the respondents and that he was present at the dinner and agreed to discontinue the practice but failed to keep this agreement. Sciscent, according to findings, was warned to discontinue this practice and later received letters from two manufacturers advising him that because of a change in their distribution policies they would be unable to fill his orders. The respondent Louis Saul, according to findings, admitted writing a manufacturer complaining about this price cutting and indicating his intention to discontinue the sales of the manufacturer's products if this practice were continued.

The respondents other than AR. Winarick, Inc., are ordered to cease entering into any agreement to restrain, monopolize or eliminate competition in the purchase or sale of these products; from fixing, establishing, quoting or maintaining prices, or agreeing to fix and maintain the prices at which such products shall be sold by them; fixing and maintaining or agreeing to fix and maintain, the amount of discount to be allowed purchasers of the products; agreeing not to sell their products at prices less than the suggested price lists circulated by the manufacturers of such products or at discounts in excess of ten per cent., or at any other agreed discount, and from coercing, threatening or intimidating any jobber of beauty or barber supplies for the purpose or with the intent and effect of compelling such jobber to sell his products at the manufacturer's list prices, or at an agreed discount therefrom, or to refuse to allow discounts in excess of ten per cent, or any other agreed amount.

The Commission further orders AR. Winarick, Inc., to cease aiding or abetting the other respondents in doing any of the things prohibited in the Commission's order.

Lucky Heart To Stop

Lucky Heart Co., agrees to discontinue representing that application of its "Bleaching Cream" will make the skin ten or any other number of shades lighter, or that through its use one may have as light a skin as desired; that its "Double Strength Cream" gives the user light, smooth skin the first day; that its "L e m o n Bleaching and Cleansing Cream" bleaches the skin or sinks deep into the pores, or brings out dirt or impurities; that the "Instant Pink Cream" keeps the skin young; that its perfumes will bring good luck to the user; that its "Mystic Mojo" will enable one to win or rule in love, or that its "Fortune Telling and Dream Book" will foretell the future or give lucky numbers or signs.

The respondent also agrees not to represent that any of its products will rid the body of offending odors, kill dandruff, stop falling hair, or remove pimples, blemishes, blackheads or cause such conditions to disappear; that its "Vanishing Cream" makes the skin firm or beautiful or removes and prevents wrinkles; that its "Rosebud Skin Bloom" will give the skin new life or youth or will prevent dry skin; or that its "Cocoanut Oil Shampoo" will prevent scalp troubles.

The respondent further agrees not to represent that it pays any salary to its agents or that prospective agents, salesmen or distributors can make profits or earnings within a specified period of time which are in excess of the average net earnings or profits which have theretofore been consistently made in like periods of time by its active agents or salesmen; and to desist from use of the phrase "hair grower" in the designation of any of its products, or from representing as "free" any article when the cost thereof is included in the price charged for other articles whose purchase is required as a prerequisite to the gift.

The respondent further agrees to cease representing that "Erbru Laxative" contains herbs or roots in their natural state, or that "Erbo" has any general systemic effect; and to desist from use of the phraseology "Coal Breaker" in designation of a product referred to as "Coal Breaker Brand Pills," or any other brand name which represents, directly or indirectly, or by any similarity of sound, that this product will break a cold or relieve feverishness associated with colds.

Ferd Hopkins Must Stop

Ferd T. Hopkins, trading as D. Watson & Co., and as Colonnade Advertising Agency, New York, distributor of "Dr. J. Lariviere's Vegetable Compound," has been ordered to cease representing that this preparation constitutes a competent or effective treatment for painful menstruation; that it will build up resistance to restlessness, nervousness, cramps, headaches or fainting spells; and that restlessness, nervousness or moody spells in young women are symptoms of dangerous periods imperiling health. Commission findings are that the respondent's representations were false, deceptive and misleading.

LUSTEROID

built-in COLOR and TRANSPARENCY

▶ Both color and transparency are integral with Lusteroid rigid cellulosic tubes and vials—built right in during the manufacturing process. Perfect control of this process means that customers' specifications can be integrated with the package as it is being made.

▶ This includes multicolor labeling, processed with the package.

▶ Other advantages of Lusteroid packages are their exceedingly light weight, their great impact resistance and resilience, their dielectric resistance, their ability to withstand light, ability to resist mild alkalies and acids, their inertness to metals and many other fine qualities.

A note or phone call will bring an answer to your packaging problem.

LUSTEROID CONTAINER CO., INC.

Formerly Lusteroid Division of the Sillcocks-Miller Company

10 Parker Avenue, West • South Orange, New Jersey

YOUR LARGEST DOLLAR'S WORTH

POWCO BRAND
REG. U.S. PAT. OFF.

NEUTRAL SOAPS

Our large production and close selling margin make it possible for you to buy standardized, air floated POWCO BRAND Neutral Soaps of *better quality—at a saving.* From the wide range of *laboratory controlled* Powco Pulverized Neutral Soaps, an important dentifrice manufacturer recently selected a grade that fit his formula perfectly . . . at a saving of $35,000 a year.

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INDUSTRY'S BOOKS

The Chemistry and Manufacture of Cosmetics, by Maison G. de Navarre, Ph.C., B.S., Illus., 745 pp., D. Van Nostrand Co., Inc., New York, Cloth, $8.

Many cosmetic and chemical formularies have appeared during the last few years. Obviously the author of "The Chemistry and Manufacture of Cosmetics" has taken this into consideration as this latest volume on cosmetic manufacture does offer some claim to originality. While the book contains formulas for the manufacture of all types of cosmetic products—many of which have been tried and produced successfully—the greater part of the work is devoted to the chemistry of cosmetics. There are full details on colors, preservatives, antioxidants, raw materials, machinery, (especially for small scale operations) and all other practical topics so important to successful results. There are concise, comprehensive explanations of all basic scientific principles bearing upon cosmetics—from bacteriology and mycology, from chemistry, inorganic, organic and colloidal, and especially from the physiology of skin, hair and scalp. Particularly worthy of note are the many helpful tables and the inclusion at the end of each chapter of a digest of patents for the specific cosmetic product under discussion. Chapter Headings: Introduction; Metrology—Alligation; Equipment For The Small Manufacturer; Cosmetic Materials; Fundamental Principles; Preservatives, Antioxidants and Corrosion; Cosmetic Colors—Table of Certified Colors; Emulsions—Patent Digest; Cold Creams and Other Cosmetic Creams—Patent Digest; Lotions —Patent Digest; Face Powder—Miscellaneous Powders—Patent Digest; Make-Up—Patent Digest; Miscellaneous Cosmetic Preparations—Patent Digest; The Federal Food, Drug and Cosmetic Act of 1938; Appendix and Tables; Bibliography; Index. The bibliography and index at the end of the book is quite complete and well illustrates the scope of the work undertaken by Mr. de Navarre.

Directory of Biological Laboratories, 64 pp., Burns Compiling & Research Organization, Chicago, Pap. $3.

A timely aid in a vital phase of the defense program is Directory of Biological Laboratories, to be issued annually, of which the first number is just published. It lists laboratories related to the manufacture of biologicals, serums, vaccines, glandular products, also vitamin products and food and nutrition laboratories, etc. To a total of approximately 600 laboratories, the scope comprises, on the all-inclusive basis, laboratories concerned with biological, bacteriological or biochemical investigations, taking in research laboratories, commercial consulting laboratories, and those functioning in control of manufacturing processes. It gives personnel and professional data of the institutions listed. The work includes a buyers' guide giving a classified listing of sources of supply for apparatus, equipment, instruments and materials used in laboratories of these types.

A Pocket Medical Dictionary, Lois Oakes, S.R.N.,D.N., Fifth Ed., 418 pp., Peter Reilly Co., Phila., $1.10.

The need for a new edition of the "Pocket Medical Dictionary" is evidence that this small book has filled a niche in medical literature. A new appendix on the apparatus necessary for various techniques used in the wards should prove helpful to junior students. The book continues to make no claim to the completeness of the larger Dictionaries, but it contains most of the common terms, definitions, and tables necessary to produce an efficient book without unduly increasing its bulk.

Poulsson's Text-Book of Pharmacology and Therapeutics, by Stanley Alstead, M.D., Liverp., M.R.C.P., Lond., Third English Ed., 557 pp., Chemical Pub. Co., Bklyn., Cloth, $8.50.

This is an authoritative exposition of the subject with a sufficient blending of pure pharmacology and clinical therapeutic knowledge. An account is given of the new vitamin preparations and the now highly important sulphonamides are discussed at some length. The recommendations regarding dosage of the sulphonamide compounds are largely based on the information given in a "Memorandum concerning the use of Sulphonamide Derivatives" issued from the War Office, England, in 1940. This work is divided into the following classifications: Organic Remedies Acting After Absorption; Organic Substances Acting Locally; Salts of Light Metals, Alkalies, Acids, Halogens, Oxidizers, etc.; The Heavy Metals and Metalloids; Ferments and Food-Stuffs; Antitoxins and Bacterial Products; Appendix

The Futherance of Medical Research, by Alan Gregg, M.D., 129 pp., Yale University Press, New Haven, Cloth, $2.

The Director for the Medical Sciences at the Rockefeller Foundation tells in this book what medical research is, what the universities and foundations have done and should do about it, and of the kind of man who works at the frontiers of the unknown in order to push back the curtains of darkness at least a little in the endless search for truth. Dr. Gregg candidly discusses some of the shortcomings of the foundations and their methods, the obstacles to their and the universities doing their job properly, the booby traps and temptations that lie in their way. But here at firsthand is an account of the men of good will, with none of the sanctimoniousness that has often characterized philanthropic endeavors, of men

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THE DRUG AND COSMETIC INDUSTRY

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who critically, earnestly, doggedly, and intelligently have labored in the heat of the day and from whose minds will come the advances of the future. Contents: Medical Research Described; Universities and Foundations; The Medical Research Worker.

Fatigue of Workers—Its Relation to Industrial Production, by Committee on Work in Industry of the National Research Council, 165 pp., Reinhold Publishing Corp., New York, Cloth $2.50.

For a good many years employers and students of efficiency have been interested in determining the effect of environmental conditions upon the productivity of workers. About a decade ago it was decided to find out the effect of increasing the amount of light supplied to employees on a test job. The results showed that increasing the light improved their production, and in this sense was in line with what had been expected. However, the value of the whole experiment was thrown into question by the fact that, after the amount of light was reduced to what it had been before the test was made, productivity continued at the rate obtained under improved lighting. This and other findings resulted in the appointment by the National Research Council of a Committee to make a detailed study of all kinds of variations in working conditions, with the idea of tracking down the secret of the unexpected results obtained on the previous experiments. This Committee was under the active guidance of L. J. Henderson, of the Fatigue Laboratory of Harvard University, and the report itself was written by George C. Homans, Secretary of the Committee. This volume is the complete report of that Committee's findings, which are the result of several years of painstaking and objective study of working conditions, both physical and psychological. These findings are of the utmost value today, for they may be applied directly to the problems of National Defense, especially in connection with their relation to labor. Careful study of the principles stated in this book will well repay every business man, executive, personnel director and student of industrial relations.

Economic Implications of Public Utility Holding Company Operations, by Merwin H. Waterman, Professor of Finance, University of Michigan, Ann Arbor, 180 pp., Pap., $1.

This study raises serious doubts concerning the economic soundness of the famed utility "death sentence" clause. It adduces evidence which denies that the holding company form of organization, per se, fathers social and economic evils, and which explodes the presumptive menace of size. The following basic group of questions are answered in this work: Do holding company subsidiaries charge higher rates than independents? Are the high rates associated with large company size? Is the investor in the securities of holding company subsidiaries as well protected as the investor in the securities of independents? Do independent or subsidiary utilities show greater operating economy? Does the geographical separation of holding company office and the operating company affect operating efficiency? Are subsidiaries being "milked" by holding companies?

The Industrial Chemistry of the Fats and Waxes, by T. P. Hilditch, D.Sc. (Lond.), F. I. C., Second Ed., 532 pp., D. Van Nostrand Co., New York, Cloth, $7.50.

The present edition of "Industrial Fats and Waxes" is now published as a separate monograph, and not as one of a series of textbooks on industrial chemistry. It is somewhat longer than the original edition, since in the interval between the publication of the two books there have been a number of technological developments which demand notice, and an even greater extension in knowledge of the composition of natural fats and waxes, and of the chemical properties and behavior of certain groups of fats utilized in one or another of the industries which depend upon these raw materials. While the general plan of the volume has been left unaltered, it has therefore been necessary to modify or to add to some of the contents of its chapters. It has been possible to give much more positive information than formerly as to the kind and proportions of individual fatty acids present in the fats of technical utility or potential interest, and also as to the more prominent specific glycerides which occur in these materials. Moreover, on the chemical side, important advances have been made in some technically useful methods of analysis, and also, especially, in further understanding of the processes which go on during the oxidation and the polymerization of the more unsaturated fats. The chief new additions to fat technology are, perhaps, the development of a large number of semi-synthetic detergents in which the carboxylic acids of the fatty soaps are replaced most often by salts of sulphates or sulphonates of long-chain carbon compounds (although basic (ammonium) or neutral types of compounds have also been proposed); the utilization of fresh fatty oils, of semi-synthetic drying oils, and of synthetic resins in the paint and varnish industries; improvements in margarine making this product, nutritionally and in physical properties, more nearly the equivalent of butter and superior to the latter in resistance to oxidative rancidity; and important, although not fundamental, improvements in the extraction and refining of fatty oils. The use of higher vacua and of acid-resisting metals in plant construction has contributed much to technical progress in such matters as deacidification and deodorization of fats.

The Microscope, by Simon Henry Gage, 17th Ed., 617 pp., Illus., Comstock Publishing Co., Ithaca, Cloth, $4.

In this new seventeenth edition, additions and modifications have been made to clarify the text and add some new phases in microscopy such as the electron microscope, the new plastics for mounting media instead of Canada balsam, and the new models of laboratory and research microscopes. The work contains such plain explanations of the principles of the microscope, and such directions for using it, illustrated by numerous figures, that the beginning student will be able to gain a firm grounding in microscopy. Methods of preparing tissues for study are also presented, with abundant examples. For the research investigator, the newer and more fundamental methods in microscopy are described. The illustrations for the dark-field condensers have been modified to show more accurately the course of the light from the mirror to the dark central stop and the extension from that level as a hollow cone to finally focus on the object. There has been added a statement with illustrations of the new high-pressure mercury-lamp bulbs for supplying the ultraviolet for fluorescence effects and for photographing with the microscope. While directions are given for fixing, cutting, and staining objects for study with the microscope, special emphasis is put upon the study of living and fresh tissues wholly unmodified by fixers and stains, for it is believed that it is only by an application of all the different methods available that one can get an adequate conception of the complexity of structure and function. Finally, there is a brief history of lenses, spectacles, and microscopes, with portraits of nine of the great leaders in this field.

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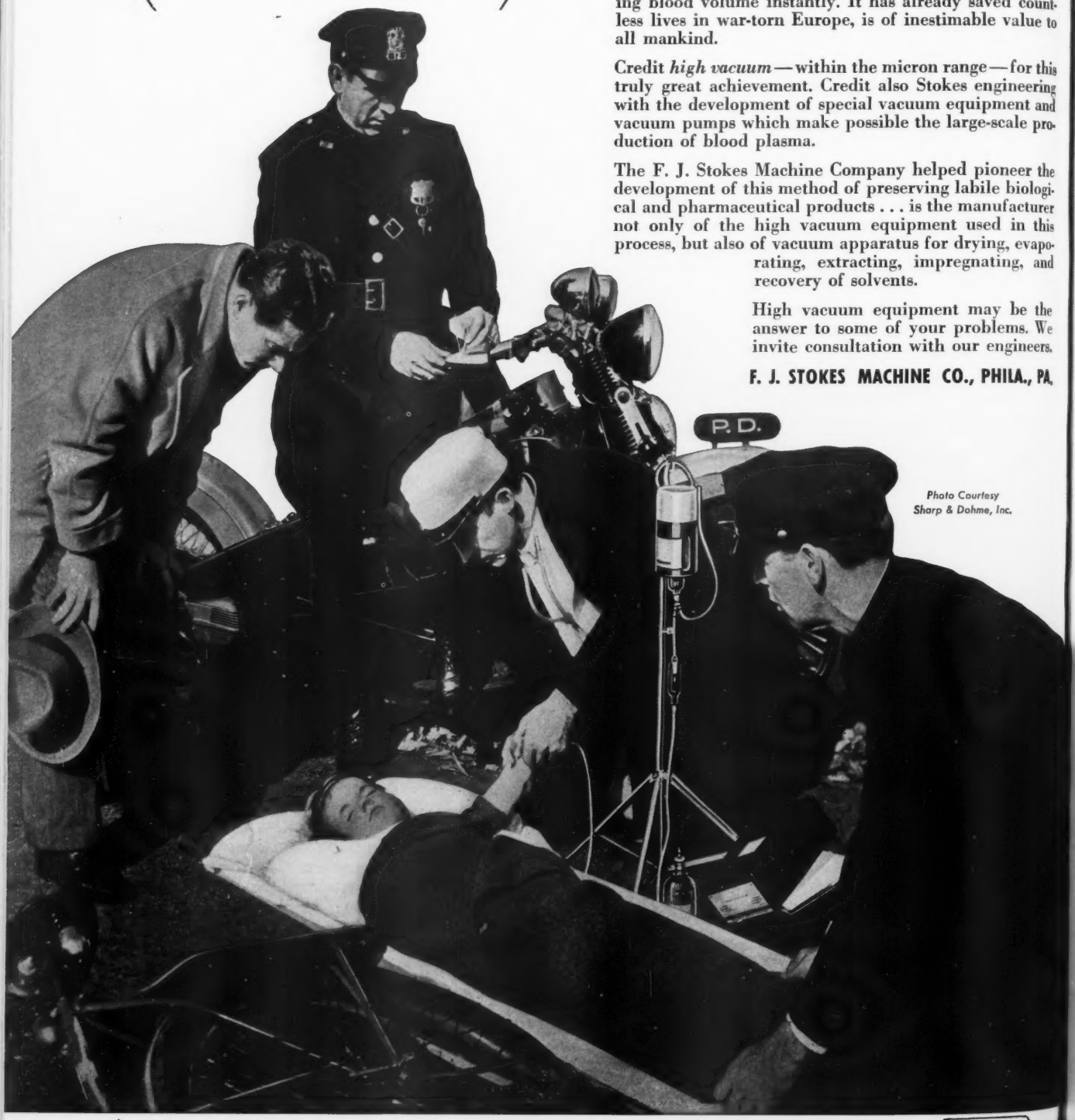

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PRODUCTION FORUM

By FRANCIS CHILSON
Production Engineer

BUILDING CAPACITY

In these days when construction materials are so difficult to get and when we all are piling up inventories of every kind of material, the utilization of space becomes a matter of compelling importance. As we have so often said, modernization is one way of getting additional space because a well modernized plant will accomplish a greater volume of production in smaller space. But while we may make additional space available through modernization, it may not, in all cases, be sufficient in view of the heavy inventories everyone is carrying. Warehouses, unfortunately, do fill up and, while in an ideal sense every warehouse should be so designed that each item of merchandise is accessible directly, expediency compells us to make compromises.

It is axiomatic that sound warehousing practice dictates the maximum use of air space. Since, however, an inventory consists of a great variety of items, it is inevitable that some of the items are kept in relatively few containers. If, for example, your inventory requires a single barrel of a certain chemical, it is obvious that, unless you have the means of accomplishing it, you cannot under ordinary circumstances use the air space above that single container. Years ago at Merck and Co. we were able to stave off the construction of a new warehouse through the introduction of barrel shelves which made it possible to stack items *horizontally* instead of vertically. In other words, these barrel shelves consisted of four tiers. Hence each shelf could be used for a multiplicity of items without in any way decreasing the accessibility of the stock. A feature of these shelves which can as well be applied to case, bundle, or bag stock is that on the outer edges of the shelves there are no vertical members to restrict the horizontal movement of the stock.

In these days I think we can gain space by consolidating a good deal more than we ever have, even by consolidating in solid stacks a great variety of dissimilar items. I say this advisedly because we now are in a time when the value of space is greater than the labor involved in extra handling. Moreover, nearly everyone of us who has an extended line has to contend with a great many slow moving items. These slow moving items, therefore, can be piled together and one upon the other without any great loss of efficiency and with a great gain in area and in cubic space. By way of warning, however, it must be emphasized that where a consolidated pile of this kind is established, a record should be set up showing the exact position of every item both horizontally and vertically in the stack. Such a record would make it possible, when it is necessary, to get at a specific item in the stack.

Another thing which can be done in a great number of instances is to plan the production of slow moving items so that they do not conflict too much with the regular run. As a matter of fact, the slow moving items of the kind which we would pile together as described above could all be planned at one specific time and all or several of the items could be run in sufficient quantities to take care of a year's requirements. Again I wish to emphasize the need for both careful planning and accurate location records because without extremely accurate records, the consolidation of warehouse stock will result in hopeless confusion.

Mixed stock in small quantities, of course, is most accessible and convenient when piled on some form of shelf or bin, but bins require aisles and when space is at a premium, aisles are expensive. It would be possible to set up consolidated storage areas without mixing the stock by mounting bin sections on roller conveyors so that they could be pushed in or out of a stack. To

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visualize this, suppose you had an entire bay with an aisle on either side of it. Suppose further that the floor in the bay were laid solid with the cheapest possible roller conveyor. Bin sections made of wood could be mounted on these roller conveyors and they could be placed close together without any lateral aisles between them. When a specific item is wanted, an entire section could be pushed out in the same manner that a sectional laboratory filing case works.

All these methods of consolidation apply more particularly to packaging material than they do to finished stock. Even though items are slow moving, they are called for by customers with sufficient frequency to necessitate accessible storage. This can be accomplished by the use of a revolving bin which can be made to contain a great many different items. The main supplies of such items can be left in packing cases in consolidated stock areas, since in most instances a single case will service customers' orders for a considerable period of time.

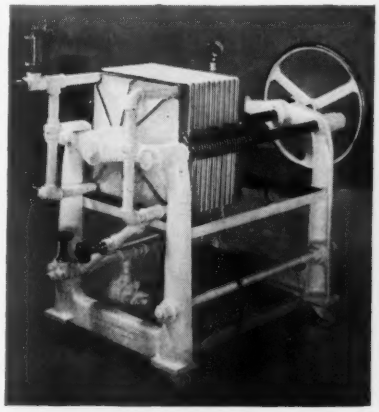
DRUG AND COSMETIC PLANT EQUIPMENT

It is futile, I suppose, to talk about ideal equipment now, when all of us are having such a terrible time getting any kind of equipment at all, but it is earnestly to be hoped that after the war is over we can persuade our great industry to take more pride in its plants. Every time I pass a local Coca Cola bottling plant or a well equipped local dairy, I feel a little sick because the comparison in point of equipment, layout, and cleanliness is so striking between these little plants and our industry. In some of the small Coca Cola bottling plants doing a few thousand dollars a year in business there are more stainless steel and polished fittings than in some of our very large plants which do a business of several hundred thousand dollars. These little local plants also are invariably spick and span whereas the majority of our plants, in which, since we manufacture medicinals, cleanliness should be paramount, are anything but spick and span.

In a great many instances our managements, whose previous training and experience was in sales and not in production, are exceedingly cheap when it comes to buying equipment. When it is considered that to trim up production equipment as it should be trimmed involves an additional expenditure of not more than twenty-five per cent. of the cost of the original equipment, and when it is considered further that production costs are a relatively small part of total operating costs, one wonders why our managements always seem to bend over backwards to keep plant equipment investment at a minimum. Every production man should lay his plans now for what he would like to do in the future when it is possible to obtain equipment. The trend toward better equipment beautifully finished and arranged already has, in fact, begun. The writer recently was connected with a new cosmetic project, about which unfortunately no publicity can be given, in connection with which the watchword was to make it unsurpassed in efficiency and beauty. The result, we believe, fulfills the mandate. When the job was completed, it was estimated that the incidental little trimmings had increased the cost of the project only by fifteen per cent. This amount amortized over the years the plant will be in operation is trivial and results to date have already shown that decreased operating cost will more than compensate for it.

UNIVERSAL FILTER

My good friend, Fred Ertel, President of Ertel Eng. Co., Kingston, N. Y., has just introduced a new compactly designed all purpose filter. This job was introduced to provide a unit suitable for any kind of filtration from coarse free filtration to germ proof ultra filtration. It is designed to be used with all types of filter media such as filter paper, filter cloth, asbestos sheets, etc.



One interesting feature of this equipment is the absence of rubber washers or gaskets around the plates. The plates are so designed that the filter media forms a seal around the edges of the filter frames, thus preventing any leakage. Closing of this filter is accomplished by a single hand wheel, no other tightening bolts being required. It is built in standard acid proof bronze but can be obtained in stainless steel or Monel.

GOVERNMENT INEFFICIENCY

For many years it has been the practice of businessmen to gripe at the inefficiency of the Government. Everybody in the Government from the President down is damned because certain things are not accomplished within a specified period of time and at no cost to the taxpayer. Government bureaus and commissions are declared to be wasteful, extravagant, and inefficient.

For a long time I used to hold such views myself without analyzing them critically because my contacts with the Government did not give me any too good an opinion of Government efficiency. But suddenly the

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light dawned on me. I began to observe that the men who howled most about Government inefficiency were themselves heads of factories which were governed by inefficiency. As a matter of fact, I have come to the conclusion that in business generally, in spite of what the textbooks say, efficiency in management is not the rule but the exception. Now if a small businessman cannot manage his own small business efficiently and if, on his own small scale, he tolerates careless extravagance and wasteful practices, it is difficult to see how he has any right to howl to the President or to the heads of any other Government bureaus who are dealing not with a few individuals but with millions over whom they have absolutely no mandatory control.

In the main, the Government must accomplish its purposes by perserverance and within the framework of the law. The small businessman who so often calls the President a dictator is in fact a member of the dictatorial system because he can enforce his employees to comply with his edicts. So if the job of managing a corporation of a hundred people is in so many instances badly bungled, then it ill behooves anyone of us, because the Government cannot manage a hundred and thirty million people without some waste, lost motion, and inefficiency, to make complaints. On the whole, all things considered I think our Government does a pretty good job and some of the Government departments are managed with a degree of efficiency which would put the average businessman to shame.

MOISTURE PROOFING

One of the most important functions of packaging material is to protect the product against the infiltration of moisture. This is particularly true if the product is hygroscopic or is in any way affected by moisture absorption. Now a great many claims have been made for various kinds of packaging materials. I think all of the claims are sincerely made, but in the main are based on a misconception of the term "moisture proof." It is possible to get a packaging material which, when applied to containers, will permit them to be immersed in water for a considerable period without any appreciable leakage, and yet that same material, when exposed to moisture in the vapor phase, will permit the penetration of water about as readily as a sponge. I remember some years ago when one of the first moistureproof transparent cellulose sheets was placed on the market. The demonstration I think was to immerse a package of cigarettes wrapped in this material into a pail of water. Such a test was very striking but entirely meaningless. Our products are not immersed in water under normal circumstances, but they frequently are exposed to moisture vapor in the air at varying percentages and temperatures.

Recently I was called upon to cooperate in the development of a moistureproof package. The materials used consisted of foil of various kinds, pliofilm, transparent cellulose sheets, waxed paper, parchment, glassine, and several types of paper stock treated with so-called moistureproof coatings. The test used was that recommended by the U. S. Department of Standards for humidification. Before the test began I had some preconceived ideas about the moisture-resisting qualities of certain materials and these ideas were certainly knocked into a cocked hat.

One material, now unfortunately unobtainable because of defense conditions, was by all odds superior to everything else tested under exactly the same conditions and checked with the most exacting laboratory procedures. Another relatively inexpensive material turned out to be a surprisingly good runner-up. And a lot of the so-called moistureproof packaging materials were pretty sad.

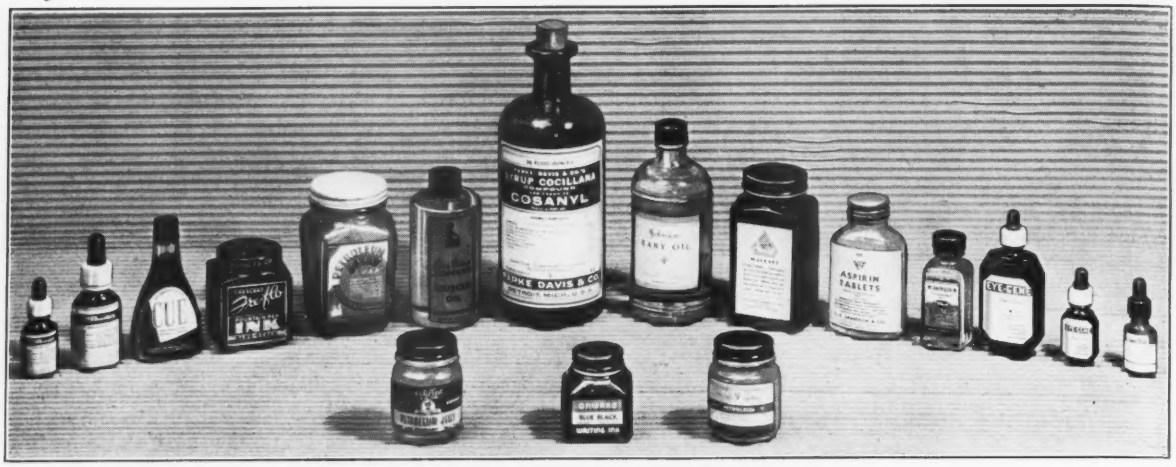
In connection with making tests, it may be mentioned that you can warp your judgment completely by making the tests too severe. In one instance packaging materials were stored in an atmosphere of live steam. Such a test is meaningless. The tests should be conducted in an atmosphere which provides a range of humidity and temperature variations such as the product will encounter in the worst area of the country and the test should be conducted over a period of not less than six weeks. Moreover, in order to make the results truly comparable, the same packages should be used throughout with the same contents and a considerable number of each style of package should be used. The reason for this is that when a package is sealed, the package seal or the package itself may in some way be defective and a high moisture penetration may be noticed which normally would not be the case. At the conclusion of the tests, the average of the weight gains or losses for each class of material can be tabulated and directly compared.

WINE

Grain alcohol has increased in price to such an extent that a number of manufacturers are considering the substitution of sherry wine as a menstruum for products where the U.S.P. and N.F. will permit its use. Wine can be substituted for any menstruum up to twenty per cent. Since domestic wine can be purchased for a fraction of the cost of alcohol, it is logical to make this substitution and at the same time the industry should make an effort to have wine recognized as an official menstruum. It must be remembered, of course, that where wine has been substituted, the residue in the exhausted mark cannot be distilled off because this would require a distiller's permit and it would make the alcohol so recovered subject to the alcohol tax.

OILLESS BEARINGS

It is interesting to observe the increasing use of oilless bearings which are made by compressing metal powders into appropriate shapes and then impregnating the shapes with lubricants under vacuum. I think a good deal of the credit for the development of methods of compressing metallic powders must go to F. J. Stokes Machine Co. who have been engaged in building such equipment for a long time.



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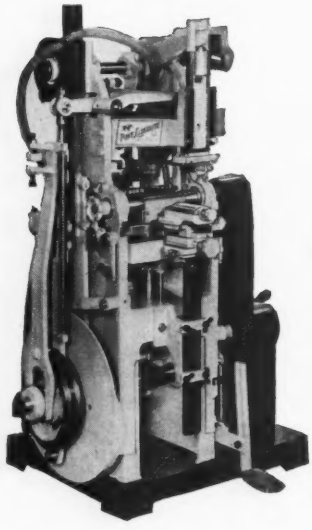

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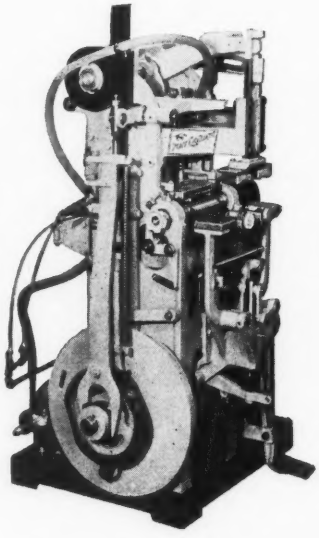

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Examine the simple, easy-to-change-over "petty-cash" change parts! If you want data on cost of installation for *your* problem, send us your full line of products. You'll get a real "lift" when you learn what *you* can save!

DIRECT-ON-PRODUCT LABELING, TOO!

Of course you can LABELRITE directly upon your products, too. Hardware and ceramics manufacturers are using them NOW. Phonograph records, reels, spools, toys, batteries and manufacturers of many other products are saving money with Labelrites—perhaps *you* can too!

Send for Catalog with complete details!

NEW JERSEY MACHINE CORPORATION

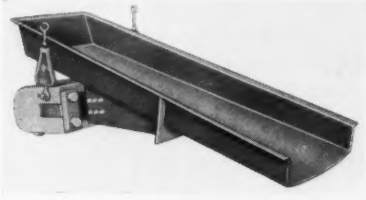
14th Street and Willow Avenue . . . Hoboken, N. J.

CHICAGO OFFICE, 549 WEST WASHINGTON BLVD.

• *Sales and Service Representatives in 14 Industrial Centres!* •

HEAVY VIBRATORY FEEDERS

The Syntron Company, 570 Lexington Avenue, Homer City, Pa., have just added two new models of electromagnetic Vibratory Feeder Conveyors to their line. The Model F-4 illustrated here, has a capacity of up to 100 tons per hour, and carries feeder pans as wide as 36 inches and as long as 60 inches in size. The larger capacity Model F-5 will handle as much as 500 tons per hour of such material and can be supplied with troughs as wide as 48 inches and from 60 inches to 96 inches long.



These new models, like the smaller-capacity Syntron Feeders, are vibrated at high speed by a pulsating electromagnet. The exclusive, patented principle of energizing these magnets through the medium of a rectifier tube accomplishes the heavy tonnage capacity.

One major advantage is the finger-tip rheostat control of the rate of flow, permitting a range of feeds from a rushing torrent down to a slow dribble. Another major feature of this equipment is the entire absence of moving parts, such as gears, cams, screws, discs, rollers, idlers, connecting rods, etc.

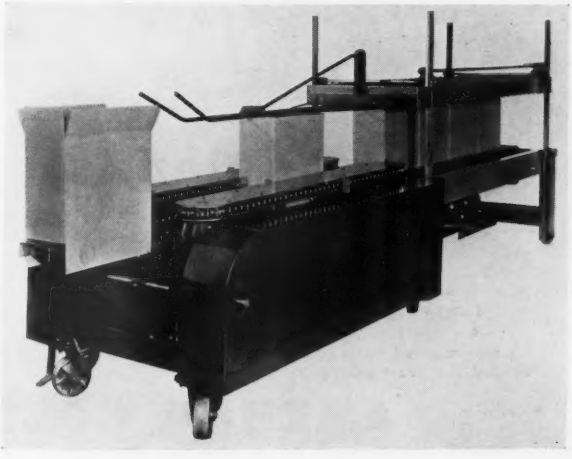
MARKING MACHINES

It not infrequently happens that there is a necessity for placing a code number, a name, a trade-mark, or some similar identifying or decorative symbol on containers of various kinds. When the containers are uniform in shape, this is a relatively easy job but when they are round, spherical, or irregular, marking then becomes something of a problem. For example, an oval compact case or a cylindrical lipstick holder is not very easy to mark in a neat, decorative fashion.

Such containers can be marked by both hand and automatic means through the use of marking machines developed by the Markem Machine Co., Keene, N. H. This company has developed machines for imprinting directly on glass, metal, varnished surfaces, wood, plastics, etc. The machines are available in one or two model units and it does not make any difference whether the surface is flat, round, curved, or angular. This company, for example, developed the equipment for printing trade names on the tapered surfaces of radio tubes. Certain of these machines also have been used for imprinting on plastics and on wood with gold leaf as, for example, in marking pencils. Imprinting is done with long-life rubber plates and quick setting colored inks. The Markem Co. has developed a great variety of marking inks and compounds for various classes of work. Through the use of this equipment it is possible to print your label on a glass container.

SEMI-AUTOMATIC CASE SEALER

A-B-C Pkg. Mch. Co., 225 S. 4 St., Quincy, Ill., manufacture a sealing machine which will produce sealed containers measuring from 6″ to 20″ in width, 2″ to 30″ in height, to 36″ length, at the rate of 2 to 15 cases per minute. It is known as Model 1201 and is quickly adjustable to the various sizes. Shipping containers to be sealed are placed on the horn by an operator, and the packing is completed. Tripping mechanism propels container through the sealer, applying adhesive and sealing the container.



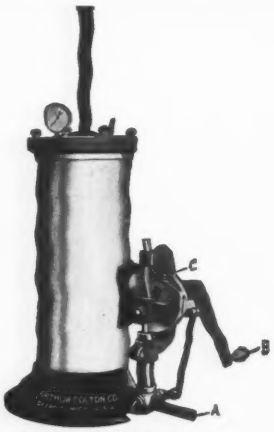
The adhesive applying mechanism is particularly adapted to the use of *Sodium Silicate* which heretofore has been objectional in automatic gluers, also the design permits the sealing of empty containers where it is necessary to seal the empty container before packing.

The complete unit is mounted on casters and can be readily moved to various departments for packing. The machine is made in three styles, to seal both top and bottom flaps, top flap only, or bottom flap only. Operations of machine are guarded so that shrinkage from machine sealing are eliminated.

GRADUAL GRADING MACHINE

For some time I have been wondering why somebody did not bring out a grinding device designed to permit gradual reduction of the product. As you know, materials which come in large chunks such as hemlock bark and jalap must be broken down in a cutter before they can be fed into a pulverizer for further reduction. Of course in regard to these two particular items, the cutter reduces them fine enough for extraction purposes. But it often happens that it is necessary to make a 60 mesh powder out of a root such as gentia or licorice. This is one hell of a job involving a number of transfers.

The Prater Pulverizer Co., 1829 South 55 St., Chicago, have developed what they call a gradual reduction hammer mill which is intended to take large chunks and gradually reduce them to fine powder. This is accomplished by mounting the hammers in the form of a pyramid, the small hammers being near the



No. 3 Hand Paste Filler

Hand Tube Closer

Foot Power Crimper

Colton Hand Operated Machines

No. 3 Collapsible tube filler (hand operated) for tubes up to 1″ x 5½″ long.

Hand operated tube closer made in two sizes and styles to seal tubes with the Colton Clipless Closure or to seal tubes for applying clips.

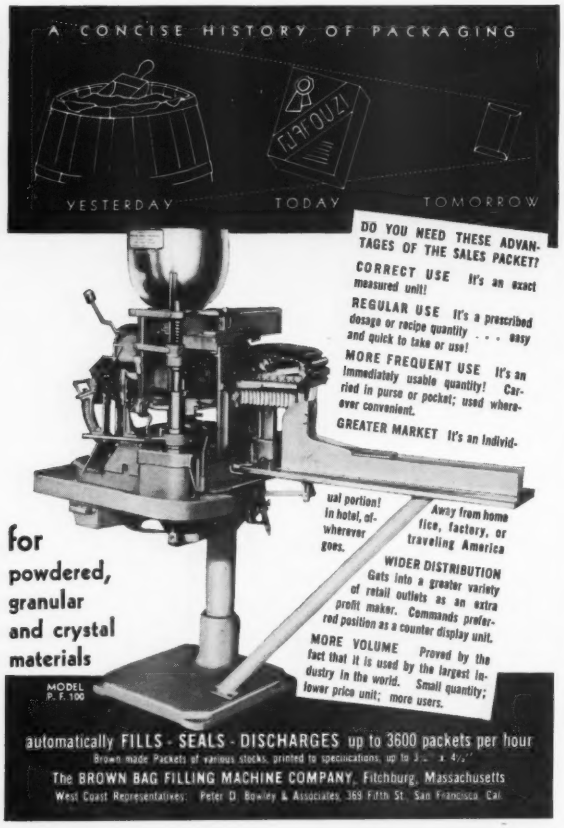
Foot operated crimper for applying final corrugation to the closed end of the Colton Clipless Closure which gives it a decorative appearance as well as greater rigidity to the closed end of tube.

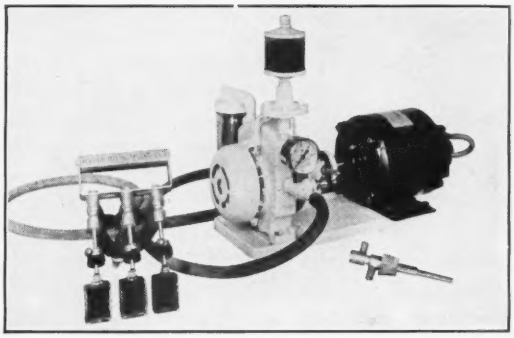
We also furnish this same machine without the crimping jaws for applying clips.

Our catalog No. 11 illustrates a variety of fillers and closers to suit production required. Please make us acquainted with your requirements and capacity, and we will be pleased to recommend machines best suited for your purpose.

ARTHUR COLTON COMPANY

2620 East Jefferson Avenue Established 1884 **Detroit, Michigan, U. S. A.**


A CONCISE HISTORY OF PACKAGING
YESTERDAY
TODAY
TOMORROW
DO YOU NEED THESE ADVANTAGES OF THE SALES PACKET?
CORRECT USE It's an exact measured unit!
REGULAR USE It's a prescribed dosage or recipe quantity . . . easy and quick to take or use!
MORE FREQUENT USE It's an immediately usable quantity! Carried in purse or pocket; used wherever convenient.
GREATER MARKET It's an individual portion! Away from home in hotel, office, factory, or wherever traveling America goes.
WIDER DISTRIBUTION Gets into a greater variety of retail outlets as an extra profit maker. Commands preferred position as a counter display unit.
MORE VOLUME Proved by the fact that it is used by the largest industry in the world. Small quantity; lower price unit; more users.
for powdered, granular and crystal materials
MODEL P. F. 100
automatically FILLS - SEALS - DISCHARGES up to 3600 packets per hour
Brown made Packets of various stocks, printed to specifications, up to 3″ x 4½″
The BROWN BAG FILLING MACHINE COMPANY, Fitchburg, Massachusetts
West Coast Representatives: Peter D. Bowley & Associates, 369 Fifth St. San Francisco, Cal.



3 gallons per minute

is the filling rate of the ERTEL Portable Vacuum Bottle Filler, widely used throughout the drug, cosmetic and toilet preparations trade. It fills any type bottle and absolutely will not drip. Air cooled motor and self-oiling feature are "extras" you get with the ERTEL Portable Vacuum Bottle Filler.

• WRITE TODAY for your FREE copy of our illustrated catalog, giving complete details on ERTEL Liquid Handling Equipment, which is guaranteed original in design and construction.

ERTEL ENGINEERING CORP.

Manufacturers and Designers of Liquid Handling Equipment

KINGSTON, NEW YORK

New York Show Room, 40 West 48th St.

throat of the machine. The large chunks entering the machine are beaten down gradually in the tapered bashing chamber. The material being reduced is forced along more or less in screw conveyor fashion. We have never seen one of these machines in use. They were developed for farm purposes but the idea looks good.

Incidentally, speaking of farm equipment, you would be surprised at the quality of the inexpensive hammer mills and cutters which have been developed for farm use. Farm equipment generally is cheap, somewhat rough in design, but almost invariably is very flexible to suit farm conditions. One of my clients is using a farm hammer mill which is so designed that the hammers can be taken out and replaced with knives. Thus it can be used either as a cutter or as a hammer mill.

FILTERS

U. S. Hoffman Mch. Co., 219 Lamson St., Syracuse, N. Y., have issued a catalog describing their line of filters. These filters are high capacity vertical tank pumps which hitherto have been used pretty largely in the machine tool industry for filtering coolants and also in the oil industry for filtering kerosene and various other hydrocarbon distillates. The machines can, however, be used for any filtration operation. The filter leaves are especially designed wire fabric units which do not require bags or cloth. The material to be filtered must, of course, be treated with some form of filter aid so that a cake can be formed on the leaves. Each leaf is fitted within a pair of scraper blades which are actuated from the outside of the cylinder in such a way that the leaves can be scraped clean without opening the filter.

GALVANIZED PAINT

Everyone who has anything to do with plant maintenance has been faced with the problem of painting galvanized iron. Therefore, it is of interest to bring to your attention a type of paint called Galvanum manufactured by Vita-Var Co., Newark, New Jersey because this paint will stick to untreated galvanized iron surfaces and it does not require any prior treatment of the galvanized iron whatever. It is obtainable in a variety of colors and it may also be used for painting wood, iron, and ordinary steel.

SUGATHIN

If you have had trouble finding a lubricant for effervescent tablets, I suggest you try Sugathin which is a lecithinated sugar manufactured especially for pharmaceutical purposes by W. J. Fitzpatrick Co., 111 North Canal St., Chicago.

The Fitzpatrick Co. are the manufacturers of a comminuting machine which to my mind is a crackerjack of a unit. Sugathin is an ordinary cane sugar containing approximately 25 per cent. of Lecithin. It is white, completely soluble, and it has a pleasant taste. It also can be used as a vehicle for triturates.

GOING NATIVE

This is to let you know that I have just purchased a country estate about the size of Delaware—over 700 acres in fact. It is my intention to grow some crude drugs and to become a "weak end" farmer. I have started to modernize the place with immense enthusiasm and in this endeavor have had a number of interesting conversations with adjoining farmers.

I already have learned that it is not desirable to have Ayrshires because they have small teats. As one old farmer expressed it, "Small teats ain't no good 'cause you cain't get a holt of 'em." I can understand his attitude perfectly because I do not like small teats either. My hands are somewhat clumsy. I expect to learn a lot more about farming before I go broke.

Gordon Cox of the Tilden Co. is one of my neighbors and I am going to rely heavily on him for advice. He also, I understand, is a gentleman farmer—a gentleman at any rate—but I understand that the part of farming he prefers is fox hunting.

As soon as I get this modernization job started, I am going to invite a few of you birds up as "work end" guests. I will furnish the whiskey. Candidates will please begin making application as I have a hell of a big dam to build.

SEND FOR A COPY

Downingtown Pump Co., Downingtown, Penn. have presented a bulletin describing their Squeegee Type pump. These pumps employ a unique principle unlike a centrifugal, rotary, reciprocating, screw, or diaphragm pump. The Squeegee principle is explained in the bulletin.

Marco Co., 5325 Westminster Ave., Philadelphia, have published a folder on their Flowmaster line. In it is a description of a homogenizer which, they claim, differs radically in design from the conventional piston type and employs a novel principle of compounding which permits homogenizing at relatively low pressures. The folder gives general information and illustrations show construction details.

Surface Combustion Co., Toledo, Ohio, have issued a reprint from *Heating and Ventilating* which tells of the Kathabar humidification and dehumidification system just installed in the new War Department building.

Alsop Eng. Co., Milldale, Conn. wish to call your attention to their new catalog which, in addition to giving information about their standard line of processing equipment, also has complete data on new developments in the field of filtration. Their new sealed disc type filter shown in the catalog is designed in such a way that several times the filtration surface usually found in ordinary filters is available and, therefore, speed and capacity are also increased.

Transparent Packages

FOR DISPLAY VALUE AND DISTINCTION

First major package manufacturer to enter the field, Ritchie will gladly help you investigate Transparent Packaging for your product. Write for samples, prices and complete information.

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FILCO FILTERING MATERIALS

. . . for every filtering process and every filterable substance in the drug and cosmetics industries . . . filter paper, asbestos pads, cloths, filter aids, etc. Large stocks, top quality, attractive prices. Samples and technical suggestions gratis.

THE FILTER PAPER COMPANY
53 E. 24th St., Chicago

MOULDS for LIPSTICKS MASCARO SUPPOSITORIES STYPTIC PENCILS and DIES for ROUGE COMPACT POWDER

Write for Catalog

A. CAVALLA, INC. 163 W. 18TH ST. NEW YORK

Use LABELS AND SEALS

FAITHFUL by SERVICE

JOHN HORN
837-839 TENTH AVENUE
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FOR OVER FIFTY YEARS

for greater sales appeal

METAL · EMBOSSED
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DIE STAMPING FOR BOXMAKERS

NEW LIPSTICK SHADE FOR YOUR OWN LABEL

- New, popular shade of the season
- Smooth, velvety texture
- Goes on easily, simply
- Stays on for a long time

Now A new lipstick shade that will be very popular this season. It is now ready for your private label—to be sold under any name you choose. It will be a big seller and a huge profit maker this year—Cash in on it. Write for your FREE sample today.

Lipsticks made for private labels by Solo Laboratories are famous everywhere. If you are not satisfied with your present source or wish to increase your sales—a Solo test will amaze you.

SEND FOR FREE SAMPLE

SOLO LABORATORIES
3450 W. Lake Street, Dept. 1201
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Please send me free sample of your new lipstick shade.

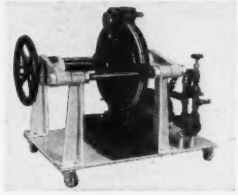
Company .....
Address .....
City ..... State .....
My name .....

Please attach to Company letterhead when answering.

Solo Laboratories

"Hurtling Hydraulics"

Speed and more speed to cut production costs—that is the constant aim of Horm designers. Horm machines attain a high volume and bring the liquids through from filter to bottle in top physical and chemical condition.



HORM JUNIOR FILTER
3 - 5 GALS. A MINUTE CAP.

Write now for complete catalog of Horm Equipment and for free sample filter disks

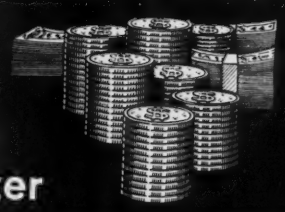
SPEED ATTAINED UP TO 2200 BOTTLES PER HOUR

F. R. HORMANN & CO., INC.

127 Boerum Place *Equipment Engineers* Brooklyn, N. Y.

FILTERS TANKS MIXERS FILLERS

Save By Using the *Right* Type of Pulverizer



A pulverizer that will handle some materials economically is often unsuitable and wasteful for others. That's why each Mikro-Pulverizer is designed and built specially to meet the requirements of each application.

Without obligation we will gladly assist you in choosing the type that our long experience has proved best for your conditions.

The Mikro-Pulverizer uses 25% to 75% less power, saves 50% or more in processing costs, cuts cleaning costs, is dustless and can be operated without skilled help.

Write for catalog and free grind test form.

PULVERIZING MACHINERY COMPANY
108 Valley Road
Roselle Park, N.J.

Here's what you'll like about the new

..."HAGERTY HANDY FILLER"

- Durable
- Moderately priced
- Eliminates spilling
- Simple to operate
- Convenient sizes
- Light construction

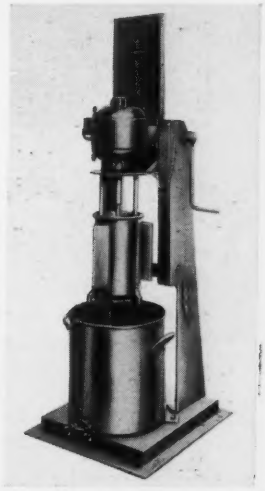
The most practical hand filler for creams, lotions and liquids.

Write for illustrated folder and prices

HAGERTY BROS. & CO.
10 Platt Street New York, N. Y.
Est. 1849

More Output in Less Space

because . . . .
It MIXES
GRINDS
DISPERSES
DISSOLVES
In One Operation
. . . . . FASTER

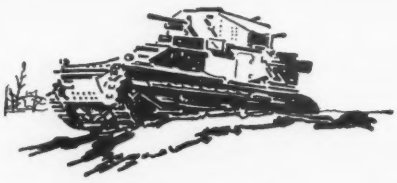


ABBÉ-LENART Change-Can MIXER

Combine any of the above operations in this unique mixer and save half the processing time, yet be assured of just the right quality. Easy to operate with low power cost; easy to clean. Assured homogeneous liquids, emulsions, ointments or pastes no matter how difficult or sensitive to compound in batches from 1 to 165 gallons.

Write for Bulletin No. 53

ABBÉ ENGINEERING CO.
56 Church St. New York, N. Y.



Made for **"Tough Going"**
despite their good looks!

FOR PRODUCTS THE BOYS IN CAMP NEED!

shatterproof
CELLUPLASTIC
CONTAINERS

Give the REAL protection of CELLUPLASTIC containers to withstand the usage and activity in camp and field. Embellish with trade-mark or insignia; processed in manufacture. Useful for a thousand items, with re-use advantages, too! Write for details!

FIRST IN CELLUPLASTICS
MYCOLOID - CLEARSITE

CELLUPLASTIC CORPORATION

50 Avenue L Newark, N. J.

BEYOND THE HORIZON

WAR, and the threat of war, have ever been powerful stimulants to inventive genius. Under the urge of national necessity, scientist, engineer and chemist are moved to even greater effort in quest of that which may contribute military advantage.

Later, when the emergency is past, their achievements will be reflected in the betterment of everyday civilian life.

ISCO Chemists and ISCO facilities are enlisted in Uncle Sam's defense effort. Their research may contribute not only to defense but also, perhaps, later on, in some small degree to make our land an even better place in which to live.

ISCO **ABSORPTION BASES**
Quality unchanged

Your need once determined, there's no variation in color, consistency or quality.

GUMS, WAXES and ALLIED PRODUCTS

INNIS, SPEIDEN & COMPANY
Established 1816
117 Liberty Street . . . . . NEW YORK
CHICAGO · CLEVELAND · CINCINNATI
BOSTON · PHILADELPHIA · GLOVERSVILLE, N. Y.

The COMPOUNDER'S CORNER

ENTERIC COATING

The use of shellac and shellac combinations has been recommended. A series of tests revealed that over a period of two years tablets so coated increased their disintegrating time materially. Salol and keratin used for a long time were found unreliable, thus supporting the information in "Remington's Practice of Pharmacy" and Scoville's "The Art of Compounding." Good results were obtained in some cases with cetyl alcohol. These coatings were tested *in vitro*.

The fatty acids investigated were lauric, myristic, stearic and eutectic mixtures of palmitic and stearic. The individual acids as well as many mixtures were investigated. It was found desirable to produce a coating with greater firmness and elasticity than the acids themselves could supply. The addition of du Pont's hydrogenated castor oil known as opal wax and castor oil was found to be of value. A small quantity of cholesterol increased the ease with which the coating would emulsify. When tested *in vitro* and by roentgen rays, this coating gave favorable results. However, in some cases disintegration did not take place until the tablets reached the colon. To overcome this, sodium taurocholate, a timing factor, was included. The formula of the completed coating follows:

Myristic acid	68%
Opal Wax	25%
Castor Oil	2%
Cholesterol	1%
Sodium taurocholate	4%

For test purposes barium sulfate tablets, which would readily disintegrate when brought in contact with the digestive fluids, were used. The coating is applied as follows: Melt the myristic acid, opal wax, castor oil and cholesterol and dilute these with an equal volume of a mixture of equal parts of ethylene dichloride and benzin. To this mixture add the sodium taurocholate previously dissolved in ten times its own weight of absolute ethyl alcohol.

This coating, kept warm at 50° C., may be applied in the ordinary manner using special precaution to build a coating of uniform thickness. No dusting powder is necessary. Hot and cold air are desirable to evaporate the solvent and harden the application. A number of applications are necessary to bring the coating up to the desired thickness.

Tablets so coated were found to remain in the stomach in certain individuals for six hours but disintegrated within two hours after entering the duodenum. In other cases, the tablets left the stomach in two hours and disintegrated within thirty minutes in the small intestines. All tests indicated that the coating possessed highly efficient enteric properties. *P. V. Maney and R. A. Kuever, J. Am. Pharm. Assoc. 1941, p. 276.*

OINTMENT BASE

Oleagenous ointment bases have been used for many years with questionable results in many cases. They are difficult to remove from the skin, they do not permit the medication they contain to be liberated freely, and, in some cases, they actually inhibit the therapeutic effect of the substances so administered.

The work of some investigators shows that certain therapeutic agents contained in such bases as lard, petrolatum, and anhydrous wool fat are not absorbed by the skin as readily as when these agents are contained in hydrotropic bases which hold several times their weight of water.

The purpose of this work was to prepare a non-oily, water-free base from which the therapeutic agent would be readily available for absorption or action on the area to which it is applied. The further purpose was to compare the antispetic effectiveness of various substances when incorporated in such a base and in the corresponding official bases.

Among the synthetic products which are suitable for the type of base desired are the water-soluble waxes, hydrogenated sulfonated oils and fats. Each type of material presents certain disadvantages such as low melting point, undesirable consistency or stickiness and, therefore an attempt was made to prepare an emulsifiable type of base. Such a base would contain no water and ointments made with it would not dry out. Several bases were prepared from varying proportions of glyceryl monostearate, cetyl alcohol and ethylene glycol.

In an attempt to improve the uniformity in the preparation of the base, equal parts of diethylene glycol and glycerin were substituted for ethylene glycol. This base was more easily prepared than any previously made. It had a white, velvety appearance, spread excellently, washed off easily, did not develop graininess, and had a breaking temperature above 40° C. The formula for this base, which was used in all subsequent experiments, is as follows:

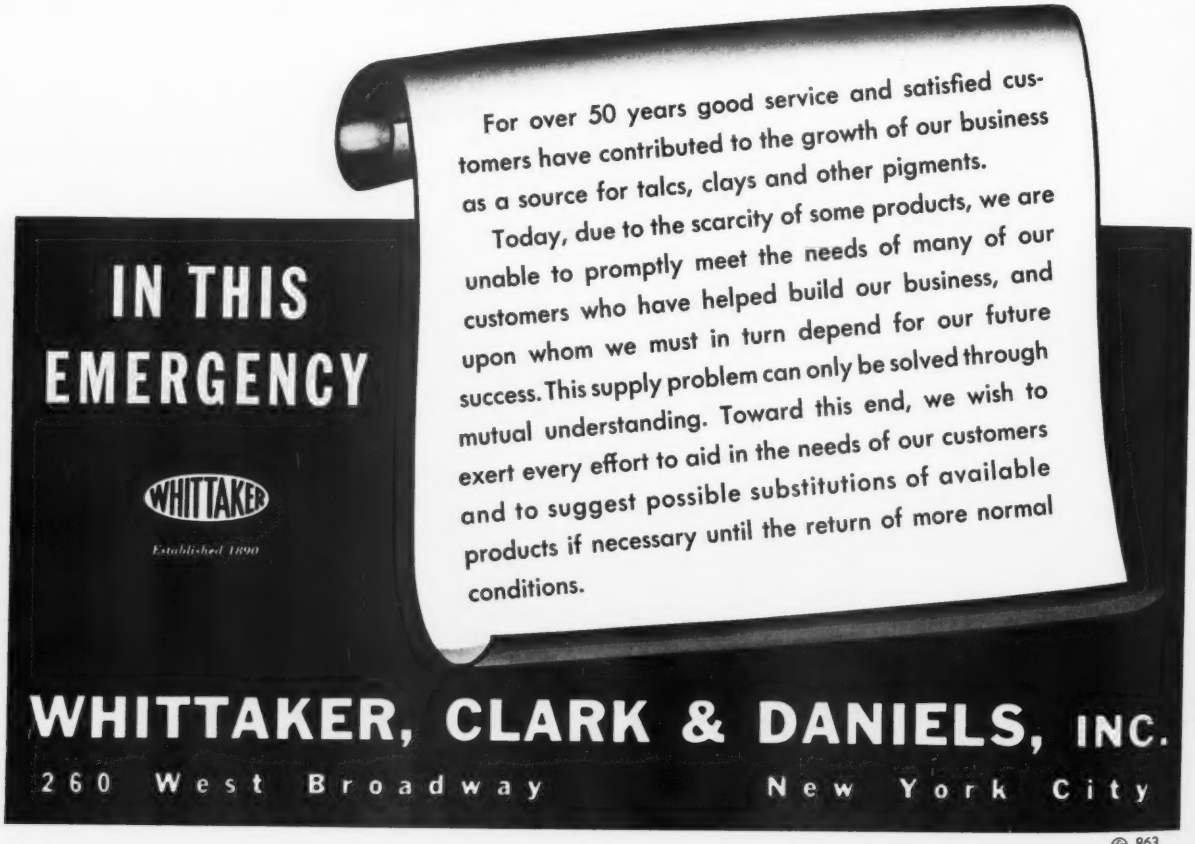
Glyceryl Monostearate	15 Gm.
Cetyl Alcohol	15 Gm.
Glycerin	35 Gm.
Diethylene Glycol	35 Gm.

The components were heated together until all the solid particles were melted. The mixture was then stirred slowly until cool.

BRIDGEPORT

VANITY CASES • ROUGE CASES • PASTE ROUGE
CONTAINERS • LIPSTICK HOLDERS (ALL TYPES)
POWDER BOX COVERS • EYEBROW PENCIL HOLDERS
BOTTLE CAPS • JAR CAPS • METAL NOVELTIES TO ORDER

THE BRIDGEPORT METAL GOODS MFG. CO.
Established 1909
BRIDGEPORT CONNECTICUT


IN THIS EMERGENCY
WHITTAKER
Established 1890
For over 50 years good service and satisfied customers have contributed to the growth of our business as a source for talcs, clays and other pigments.
Today, due to the scarcity of some products, we are unable to promptly meet the needs of many of our customers who have helped build our business, and upon whom we must in turn depend for our future success. This supply problem can only be solved through mutual understanding. Toward this end, we wish to exert every effort to aid in the needs of our customers and to suggest possible substitutions of available products if necessary until the return of more normal conditions.
WHITTAKER, CLARK & DANIELS, INC.
260 West Broadway New York City

This base was used in preparing several official and non-official ointments. Medicaments incorporated in the base included ammoniated mercury, boric acid, phenol, salicylic acid, sulfuric, tannic acid, zinc oxide, and a combination of zinc oxide and ichthammol. All ointments were of good appearance when freshly prepared, but on standing the ointments containing boric and salicylic acids became unfit for use. Tannic acid caused a slight softening of the base while the remaining medicaments used elevated the temperature at which the base separated.

The ointments prepared with the new base were compared in antiseptic potency with the U. S. P. ointments containing the same per cent. of medicament. A modification of the F. D. A. Agar Cup Method as suggested by Li and Kuever was used in the testing.

It was found that the ointments containing zinc oxide and sulfur produced no zone of inhibition using either the proposed or U. S. P. base. Ammoniated Mercury produced a wider zone of inhibition when incorporated in the proposed base than in the U. S. P. base. Ointment of Phenol showed marked antiseptic value when the proposed base was used, but none when prepared officially. Zinc oxide ointment containing 2 per cent. of ichthammol showed an antiseptic effect when the proposed base was used, but none when the U. S. P. base for zinc oxide ointment was used. Tannic acid ointment showed much greater antiseptic potency when the new base was used. *N. F. Sorg. and J. W. Jones, J. Am. Pharm. Assoc.*

NATURAL AND ARTIFICIAL GUMS

1. Results of a study indicate that mucilages from prepared and artificial gum sources are of equal pharmaceutical value to mucilages prepared from gums of natural sources.

2. Several drugs commonly called "gums" contain little or no water-soluble principles.

3. The mucilages studied were employed in the following pharmaceutical preparations:

As vehicles in various types of hand lotions.

As saponification agents.

As emulsifying agents.

As suspending agents.

As granulating agents (in tablet manufacture).

As moistening agents for pills.

As ointment bases.

(*a*) The official mucilages, those of acacia, tragacanth and chondrus, resulted in pharmaceutically acceptable preparations which make them worthy of inclusion in the Pharmacopoeia and National Formulary.

(*b*) The other mucilages from natural gums which were studied were in most respects inferior to the official mucilages.

(*c*) In almost every case of pharmaceutical manufacture, it was possible to substitute a mucilage prepared from an artificial source for one prepared from a natural source without decreasing the pharmaceutical value of the preparation.

4. The mucilages of quince seed and sodium alginate were, of those studied, the most susceptible to incompatibility with the reagents tested; the official (U. S. P.) mucilages and those of karaya and methyl cellulose were the most stable to incompatibility with the reagents tested.

5. Formaldehyde (0.1%) acts as a preservative for the mucilages studied; or esters of parahydroxybenzoic acid (0.1%) have excellent preserving powers when they are used in these mucilages. Mucilages of methyl cellulose require no preservative. *G. E. Osborn & H. G. Dekay, J. Am. Pharm. Assoc.*

SHAVING SOAP

The requirements of a good shaving soap are that it have sufficient softening action on the beard, be non-irritating to the skin, and non-corrosive to razor blades. Hair softening is of first importance. It can only be brought about by a swelling of the hair keratin, such as may take place by the action of slightly alkaline soaps.

Lathering power is of great significance. Only by the relatively long period of contact which can be obtained with lather does the active ingredient present have a chance to affect the hair. Liquids which contain soap but which do not lather are lacking in wetting properties and are less satisfactory. In a study of the swelling power of a number of shaving soaps, those containing potash soap were found superior. Triethanolamine, as well as soap made with this as alkali, did not have the desired result. However, inclusion of small amounts of both triethanolamine and its soap brought about an improvement. Lathering power depends on the kind and quality of fats used, as well as on the alkali present. The presence of glycerin decreases lathering, so that the proportion of glycerin should never be more than 10 per cent.

Even with low alkalinity, shaving soaps may have an irritating effect on sensitive skins because of attack on the keratin of the skin by the alkali. On this basis substances need to be found which suppress the skin-irritant properties of alkali, without reducing its swelling power. Glycerin falls in this class, as do sodium and potassium lactates, and in a small measure even glucose. A similar effect is given by phenols, tannins, and capillary-active protein decomposition products which act as protective colloids. Of these compounds the phenols are objectionable both because of their odor and because of their toxic nature. Tannins cannot be used because of their marked effect on the swelling action, reducing it almost to zero. Protein decomposition compounds such as those formed by the decomposition of gelatin with alkali show the most favorable action, and also to some extent possess soap-like properties.

Not much attention has been paid to the action of shaving soaps on razor blades. Corrosion is to be avoided as far as possible. Shaving creams with a pH of about 9.5 were found to show the least attack on blades. Addition of small amounts of a chromate to render the blades passive proved inexpedient, since the chromium compounds caused rancidity to develop rapidly in the soap.

Not to be ignored is the kind of water available, which in most places possesses some degree of hardness. A number of soap makers now add stabilizing agents to shaving soap to prevent deposition of calcium and magnesium soaps, which would be particularly objectionable on the face. An addition of menthol is also recommended because of its cooling and freshening effect on the skin. Menthol possesses a certain amount of astringent and anesthetizing action, making shaving a less objectionable process.

Shaving soap sometimes turns yellow to brown due to the soap becoming rancid. Tin and zinc can cause this. Sometimes an odorant is added which has antioxidant properties, which helps stabilize the soap. *H. J. Henk. Deutsche Parfumerie Ztg. 27, 129-30 (1941).*

STILBESTROL

Stilbestrol (Diethyl-stilbestrol), a new synthetic estrogen, has been released to the market by Sharp & Dohme.

Stilbestrol is indicated wherever an estrogenic effect is desired. It has been found of particular value in relieving the symptoms of the menopause, in senile vaginitis, and in gonorrheal vaginitis in children. It may relieve or prevent painful engorgement of the breasts during suppression of lactation.

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Perfumers Shelf

RARER ESSENTIAL OILS

Opoponax Resin and Oil: Opoponax oil, derived from *Commiphora erythraea*, var. *glabrescens* Engler, is obtained when genuine opoponax resin is distilled; this has a delightful, aromatic perfume and is much easier to distil than ordinary myrrh. Opoponax resin is also much easier to extract. The genuine extract is an unusually clinging perfume with a peculiar balsamic note which is very difficult to imitate.

Opoponax oil is used in almost all heavy fancy perfumes; in Opoponax itself and in Lily-of-the-Valley and Hortensia it gives very interesting effects, also in Chypre and Fougere; in Crepe de Chine it is almost indispensable, and the same applies to Reve d'Or.

Nothing very much is known regarding the components of essential opoponax oil. The scent-carrier of the oil is probably a very volatile alcohol with a boiling point of 135-137°; furthermore a sesquiterpene, the bissabolene $C_{15}H_{24}$, is contained in the oil.

Pandanus (Kewda) and Poplar Bud: The Indian Pandanus oil, whose perfume recalls lilac, honey and ylang-ylang with a predominant note of hyacinth bulbs, is an interesting oil for perfumery; according to Sadgopal it is obtained by extraction from the blossoms of *Pandanus odoratissimus L.*

The oil is mainly used for making kewda perfume, but it would also be well suited for European tastes, since its fine, flower-scent would enable it to be used in many perfumes; it would, moreover, be suitable as a "top note" or basis for modern fancy perfumes.

Pandanus absolute liquid has, according to Sadgopal, the following composition: benzyl benzoate, benzyl acetate, benzyl alcohol, geraniol, santalol (?), linalool, linalyl acetate, guaiacol, phenyl ethyl alcohol, an aldehydic body and two problematical compounds, one of which is thought to be bromstyrol and the other a phthalic acid compound. The presence of so many benzyl compounds in the oil, such as benzyl benzoate, benzyl alcohol, is rather questionable, so that one may assume that the extract was probably somewhat contaminated; in any case, during the unusual treatment by which the oil was obtained, the occurrence of a benzaldehyde odor must have been evident if the benzyl alcohol had originally been present in the oil.

Poplar bud oil, from *Populus nigra L.*, is also an oil which is rarely found in the trade, although it has a very interesting odor and deserves to find greater application in practical perfumery. The yields from poplar buds, with water-vapour distillation, amount to 0.5 to 0.7% essential oil (from the European tree) and 2% from Manchurian poplar leaf-buds.

The oil could be used for the composition of the following types: Chanel, Mitsouko, Crepe de Chine, Reve d'Or, Bois Dormant; and also in certain flower perfumes, where its camelia-like odor is not too likely to prove unduly obtrusive.

Not very much has been ascertained regarding the composition of essential poplar-bud oil. The occurrence of α-caryophyllene has been established, but this almost certainly is associated with a second hydrocarbon. M. Nakao mentioned a sequisterpene, $C_{15}H_{24}$ (Populene), which he discovered in Manchurian popular bud oil. Furthermore, an alcohol $C_{15}H_{26}O$ from the fraction Bp_{16}: 70 and 115° was found and from the fraction boiling (under ordinary pressure) at 175° an alcohol $C_{10}H_{18}O$, both of which were associated with valerianic acid. The lower boiling fractions of the Manchurian poplar-bud oil contained cineol.

Parthenium, Pepper and Polygala Oils. Another little-known essential oil is the oil of Parthenium argentatum Gray, a bushy Compositae which occurs in Mexico. The oil is characterized by its peppery odor, the carrier of which is probably a sesquiterpene. The oil could be used for making carnation scents, but also for chypre, fougere and oriental perfumes, such as Maderas de Oriente, Maja, Goyesca, Tropiques, Tendres Nuits, Floraison, Sous le Vent, Chinchilla, Bamboo, Trophee, etc.

Another interesting oil is the essential oil derived from wild pepper leaves (*Piper nigrum L.*), about which B. S. Rao writes, and which is obtained in the East Indies by water-vapor distillation. Its odor is said to recall lime-oil, but the question arises as to whether this refers to machine- or hand-pressed lime oil, for in the latter case the oil could be used in eaux-de-Cologne compounds, and also in compositions having a fresh headnote, such as Crepe de Chine, Mitsouko, etc.

The root-oil of *Polygala acicularis Oliv.*, which is obtained from the polygalaceae occurring in French Ubangi, should also be of interest; it is obtained in a slight yield by water-vapor distillation. The scent of the oil recalls fern and cinnamon. It could be used in Chypre, Fougere, Mitsouko, Crepe de Chine, etc., as the odor harmonizes with these compositions. The composition of the oil is still unknown.

Douglas Fir Oils. The wood of the Douglas fir (*Pseudotsuga taxifolia*) yields, with water-vapor distillation 3.29% of an essential oil, which differs essentially from that of the young bark of the same tree.

The oil might well find application in soap manufacture, but also in the perfumery industry for obtaining terpineol. The oil of the young bark of the Douglas

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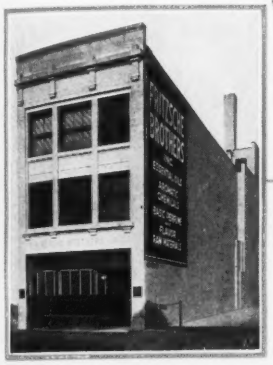

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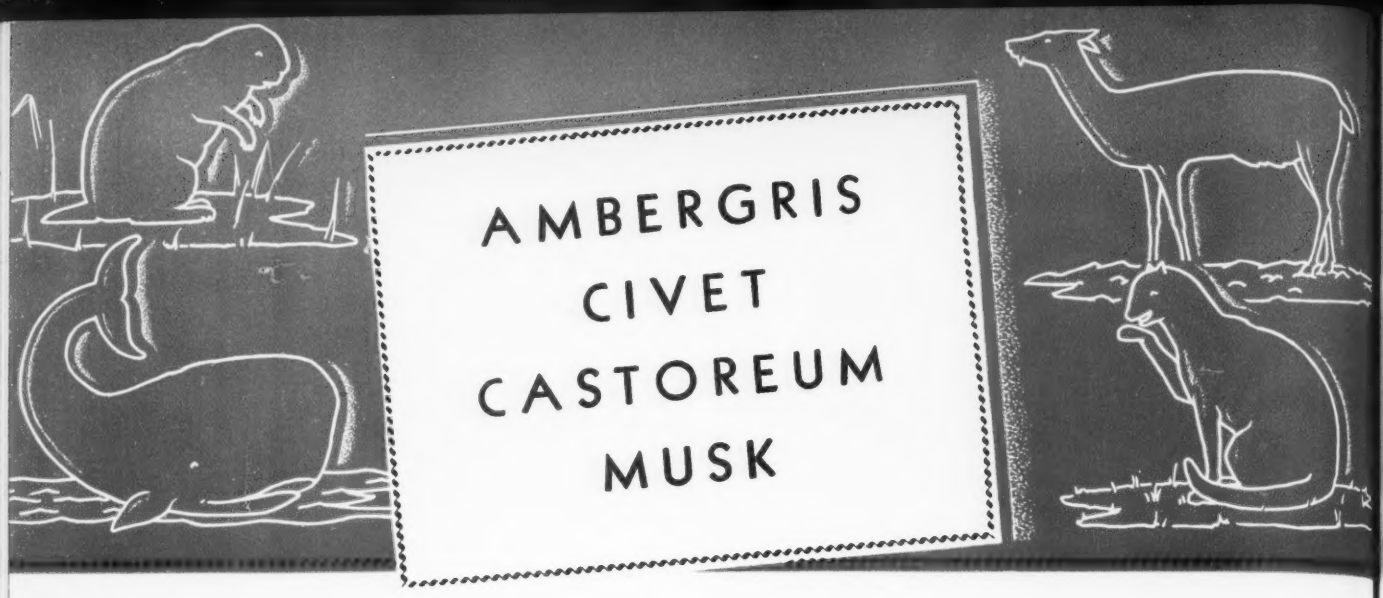

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fir which, is obtained by water-vapor distillation in a yield of about 1.01% as a light-green essential oil having a pleasant aromatic smell. This could also be used in the soap industry, above all for making Pine toilet and bath soaps.

The composition of the wood oil of the Douglas fir is as follows: about 30% 1-α-pinene, 6% 1-camphene, 14% 1-limonene, 32% 1-α-terpineol (contained mainly as free alcohol) a little bound acetic acid and small quantities of other constituents, possible sesquiterpenes, having high boiling-points.

The essential oil of the young bark of the Douglas fir is composed as follows: about 28% 1-α-pinene, 24% 1-β-pinene, 7% 1-camphene, 8% dipentene, 6% geraniol (partly as acetate), slight quantities of a sesquiterpene, traces of free acetic acid probably also capric or caproic acid and bound acetic acid.

Grape Fruit Oil. An essential oil which is becoming more and more familiar in Europe is the grape fruit oil derived from *Citrus decumana L.*, which is deserving of greater use, owing to its pleasant taste and odor, first of all in the flavors industry and secondly in the perfumery industry.

The oil is mainly useful in the blending of top notes in compositions such as Mitsouko, Crepe de Chine, Pompeia and to a lesser extent in Chypre varieties, Trophee, Kobako, Shanghai, Bamboo, Sous le Vent, Scandal, Arpege, Goyesca, etc.

It is true that little is known as to the composition of the various types of grape fruit oil, but the most common of them, called "peel oil", has been investigated by E. K. Nelson and H. H. Mottern. Its components are as follows: 90% limonene, 2-3% oxygenated, volatile constituents and sesquiterpenes, 7-8% wax-like substances (probably also citraptene—author) decyl aldehyde, octyl aldehyde, geraniol, octyl alcohol (free and as acetates), cadinene and small quantities of citral and dimethyl anthranilate; slight amounts of octyl and decyl acids, probably as esters, and very likely also nonyl alcohol were present. It should be added, however, that the oil was not only obtained by means of heat, but cold-pressed oil was also secured, whereby it presumably differed from the oil obtained with water-vapor distillation under decreased pressure by H. P. Zoller, who also demonstrated in his oil the presence of α-pinene and linalool and supposed the presence of linalyl acetate.

Grape fruit leaves oil, which was obtained by B. T. Brooks in a yield of 1.7% in the Philippine Islands, contained 25% dipentene, 15% linalool and 1% of an aldehyde which was presumably citral.

Nigella and Phebalium Oils. If really pure, an excellent essential oil is nigella oil (from nigella damascena L.), which is obtained by distillation in a yield of 0.37 to 0.5%. Its scent, which is fine and recalls that of wild strawberries, or rather muskseed oil, is so outstanding that the oil really deserves to be used more widely in modern perfumery, especially as it fixes extraordinarily well.

Nigella oil is composed of 9% damascenene, $C_{10}H_{13}O_3N$ (2-methylamino-3-methoxybenzoic acid-methyl ester), an alkaloid, which has been repeatedly examined.

Potentially very useful in the perfumery industry is also the phebalium dentatum oil (from *phebalium dentatum*, Smith) which is a native of Australia. The oil is obtained by distilling the leaves in water vapor, when a yield of 0.17 to 0.25% is obtained; it is rather similar in odor to the fruits of *Passiflora edulis.*

The oil may be used in Chypre, Fougere, Crepe de Chine, etc. Its constituents are, according to A. R. Penfold α-pinene as well as a not yet identified terpene, butyl amyl butyrate, amyl isovalerianate, geraniol, citronellol, both free and as formic ester, butyric and caproic acids, a little citral, sesquiterpene, sesquiterpene alcohol, phenolic components and a paraffin.

An interesting oil for the soap industry is the essential oil of *Phebalium nudum, Hook*, which was obtained to the extent of 0.24% from the leaves and twigs by means of distillation, by C. B. Radcliffe and W. J. Short. The oil could be used for domestic soap. It is composed as follows: Camphene, limonene, α terpinyl acetate, citronellal, citral, cinnamic acid, a phenol, probably dicyclic and tricyclic sesquiterpenes.

Mawah and Melaleuca. Mawah oil, which is obtained in Kenya (British East Africa), is also deserving of interest, as at a suitable price it could really be a marketable oil. It could be used as a substitute for geraniol and in the soap industry in particular it would be a not unwelcome and cheap substitute for reunion oil.

The following constituents were ascertained according to "The Chemist and Druggist" 107, 1927, 97: 76 per cent. total alcohols, citronellol 15.5 per cent., esters (calculated as geranyl tiglinate) 7.5 per cent., aldehydes, as citronellal, etc., 1 per cent.

Of equal importance to the oil discussed above is that derived from Melaleuca viridiflora; not the niaouli oil, which is likewise derived from this species, but a second variety which, according to T. G. H. Jones and W. L. Haenke occurs in the neighborhood of Maryborough and Brisbane, Queensland.

This oil could also be used in the soap industry as rose soap oil, and also in perfumery owing to its containing nerolidol and d-linalool. The terpene-free oil would also be of some interest. The following components have been ascertained: large quantities of d-linalool and nerolidol, some sesquiterpenes, citral, and traces of a phenol.

Daucus Carrot Oil. A volatile oil which is becoming more and more familiar is the carrot oil from Daucus carota L., which, if really faultless, has a delightful perfume of an iris-amber type; however, on purchasing the oil, the quality and not the price should be taken into consideration.

Pure carrot oil could be used in large quantities as a basis for the more modern wood perfumes, and also for all heavy Oriental shades of scent; as a matter of fact its perfume is extremely well adapted to almost all compositions. The oil is strongly recommended for better-quality toilet soaps.

Daucus carota oil has the following constituents: free butyric acid (presumably isobutyric acid), palmitic acid, and esterized acetic acid; probably also formic acid, pinene, l-limonene, daucol, a double sesquiterpen alcohol, furthermore the sesquiterpenel alcohol carotol, and in some oils also asarone and bisabolene. *H. M. Dumont, S.P.C.*

THEATRICAL POWDER

The general composition of theatrical powders is similar to that of the customary ordinary face powder. However, the following details should be observed. Stearate should be omitted and the quantity of white pigments must be considerably reduced, replacing them with high quality white talcum or finely precipitated calcium carbonate. Two powders favored by well-known actresses have the following composition: 1. white talc 40, rice starch 40, zinc oxide 20; 2. white talc 40, precipitated chalk 15, zinc oxide 40, rice starch 5. A face powder recommended in particular for motion picture actresses contains barium sulfate 80, colloidal kaolin 10 and precipitated chalk 10. Color and perfume are added as usual.

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ADVANCING THERAPY

PENICILLIN

Abraham and his colleagues discuss the bacteriostatic action of penicillin (a mold produced substance) against certain organisms that Chain and his coworkers described in 1940. The mold will grow and produce penicillin on a variety of mediums. The medium, sterilized by autoclaving, is sown with a spore suspension. Penicillin production is usually at its maximum at about *p*H 7. Penicillin can be extracted from the culture medium by ether, amyl acetate or certain other organic solvents from an aqueous solution whose *p*H has been adjusted to 2. The strong aqueous ether extract is stable. It is stored as it is in the refrigerator or is dried by the lyophilic method and kept in a desiccator. The voluminous yellow penicillin powder is hygroscopic. In dispensing the material for intravenous injection it is assumed that the ether-containing solution is sterile. Before use most of the ether must be removed by suction.

The authors tested the in vitro bacteriostatic action of penicillin on many pathogenic organisms. Its bacteriostatic action resembled sulfonamide drugs, with the following differences: 1. The bacteriostatic power of penicillin against streptococci and staphylococci is much greater. Saturated watery solutions of sulfapyridine and sulfathiazole show no complete inhibition on an assay plate, whereas penicillin at 1:500,000 gives an appreciable clear zone. 2. The action of penicillin on streptococci and staphylococci, unlike that of the sulfonamides, is influenced to only a minor extent by the number of bacteria present. Even when several million staphylococci or streptococci are present in 1 cc. of medium their multiplication is completely inhibited by penicillin in a concentration as low as 1:1,000,000, while in heavily infected wounds the sulfonamide drugs seem to have but little effect. 3. In suppurating wounds the bacteriostatic power of penicillin against streptococci and staphylococci, contrary to the sulfonamides, is not antagonized by hydrolytic protein breakdown products or products of tissue autolysis or pus.

Penicillin in a concentration of 1:500 did not appear to embarrass leukocyte activity in vitro. Leukocytes will remain completely active in any concentration of penicillin likely to be reached after intravenous injection. The effect of local application has been tried on tissue of the central nervous system of 2 rabbits under pentobarbital sodium anesthesia. Neither rabbit showed any functional disturbance after the anesthetic wore off. Its effect on the cerebral tissue of 3 rabbits was studied, and again no lesions attributable to the penicillin were discovered. These results, in conjunction with those on leukocytes, strongly suggest that local application of strong solutions of penicillin should prove innocuous to tissue cells.

According to Abraham and his colleagues, penicillin is absorbed after succutaneous injection in mice, from the intestine in rats, and antibacterial activity appears in the urine secreted subsequently. Its absorption and excretion have been further investigated on rabbits, cats and man. No activity could be detected in the blood of the rabbit at the end of half an hour after 400 units intravenously, while in the cat after the same dose the blood was antibacterial for at least one and a half hours. After duodenal introduction there was no activity in the blood and little in the urine of the rabbit, whereas in the cat activity could be detected in the blood and there was considerable excretion. Man appears to be in both instances more like the cat. By whatever route penicillin is administered, not all the active substance appears in the urine. It is not clear where this "loss" occurs. It is not known whether the material excreted in the urine is changed in any way. It still has a high antibacterial titer and has been used again for injection into patients without ill effect. Material partially purified but containing pyrogen is freed from this impurity by passage through the body.

Penicillin was administered intravenously to 6 patients with staphylococcic or streptococcic infections and locally to 4 patients with ocular inflammations. Five of the first 6 patients had previously been given various forms of chemotherapy and some also had received surgical treatment. They were patients for whom no further treatment likely to be of benefit could be proposed. After treatment with penicillin the temperature fell and the general local condition improved. Recrudescence was attributed to insufficient penicillin. The patients' spirits and appetite were greatly improved during treatment. Local application gave equally promising results. The authors believe that enough evidence has been assembled to show that penicillin is a new and effective type of chemotherapeutic agent and that it possesses two properties not had by any other antibacterial substance—low toxicity to tissue cells and powerful bac-

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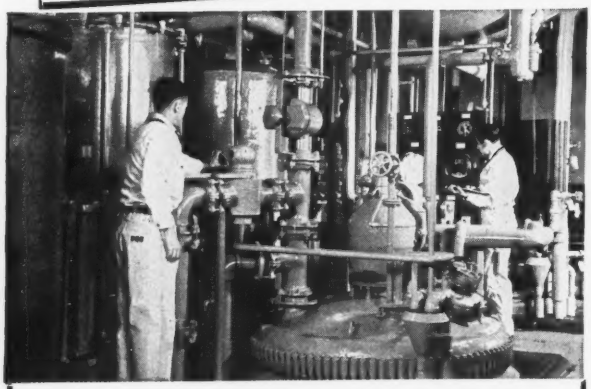

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teriostatic action. It prevents growth of a wide range of bacterial species, some of the most common and destructive organisms with which man may be infected. Its bacteriostatic action is interfered with in no way by body fluids or pus and only to a limited extent by heavy infections. *Lancet, vol. 2, p. 177 (1940).*

ANTI-GRAY-HAIR VITAMIN

The anti-gray-hair vitamin, a member of the all-important vitamin B complex, recently identified as the chemical para-amino-benzoic acid, has restored color to the hair of more than 300 human beings of all ages, who had become gray prematurely or otherwise, it was reported before the Fall meeting of the Society for Experimental Biology and Medicine at the Cornell University Medical College.

The report was presented by Dr. Benjamin F. Sieve, visiting physician at the Boston City Hospital and instructor of medicine at Tufts College Medical School, Boston, and Dr. Stefan Ansbacher, director of research and medical relations, American Home Products Corporation, New York City.

Para-amino-benzoic acid, PABA for short, has been known as a chemical more than fifty years. The chemical is not yet available for general use, and, because of the national emergency and defense priorities, there is a shortage of it.

In December, 1940, two British scientists reported finding that PABA was a constituent of yeast, one of the richest sources of the Vitamin B complex. In February this year Dr. Ansbacher reported that the chemical restored the natural pigmentation of the fur of rats made gray by a nutritional deficiency. Dr. Sieve then undertook to test the effect of this drug on human beings, after first determining that it could be given without toxic effects.

The vitamin, Drs. Sieve and Ansbacher reported, not only restored the original normal color to gray hair but also alleviated other conditions that the results indicate were due either to a nutritional deficiency or to faulty metabolism. Some of the results were so dramatic that Dr. Sieve cautioned his colleagues that they may be just coincidences and that many more clinical tests would have to be made before they can be attributed directly to the action of the vitamin.

One of the conditions remedied by the PABA, Dr. Sieve reported, was vitilego, a skin-disease consisting in the development on various parts of the body of smooth, milk-white spots due to the disappearance of the natural pigment in the skin. The disease is not uncommon and no cause or remedy for it had been known. The results observed by Dr. Sieve, he said, would indicate that it was due either to a deficiency in the anti-gray-hair vitamin or to the inability of the body to utilize it properly.

"The effect of PABA on vitilego," Dr. Sieve reported, "is most noteworthy. I have observed a definite return of color in apigmented areas of the skin. In this connection we should mention also that ordinarily highly pigmented areas, such as the nipples, appear to acquire a darker color by treatment with PABA."

"Increased libido," Dr. Sieve added, "was noted in several cases. This observation has likewise been confirmed by other physicians.

"PABA may have still other effects. Cases of sterility and impotency were treated with this drug. However, the number of cases is too small to draw definite conclusions.

"We do not want to draw premature conclusions, but, as a matter of completeness, we report an observation which may be attributed directly to the PABA or may be purely coincidental. Namely, several women who had been sterile for a period of five to six years, conceived after taking PABA in doses of 100 milligrams four times a day for three to ten weeks. These cases are mentioned because PABA happened to be the only medication.

About 300 patients of both sexes, aged 16 to 74 years, Dr. Sieve reported were treated with PABA during the past five months. These patients had varying degrees of grayness from two to twenty-four years. The treatment consisted in the oral administration of PABA tablets, each containing 100 milligrams, in doses ranging from one-half a tablet twice a day to one tablet six times a day.

VITAMIN P

Groen points out that soon after the isolation of pure l-ascorbic acid it was discovered that, whereas this substance is ineffective in pathologic conditions characterized by increased permeability of the capillaries, these disorders can be combated by extracts of peppers or lemons. This suggested that lemon juice contains in addition to vitamin C another substance which is probably a flavone or a flavone glucoside. Szent Gyorgyi designated this substance vitamin P because it influences capillary permeability. Subsequent investigations revealed that hesperidin and the glucoside of eriodictyol are the active substances. They occur chiefly in lemon peel. The mixture of hesperidin and eriodictyol glucoside which is extracted from lemons is referred to also as citrin. The demonstration of flavones encounters considerable difficulties because some of the reactions used for this purpose are not specific. Animal experiments with vitamin P likewise encounter difficulties because there is no criterion for flavone-free feeding. The type of animal best suited for this test has not been discovered, and it has not been determined which flavones are active. The author asserts that some investigators used substances that were not identical with Szent Gyorgyi's citrin, and he advises repeating the animal tests with properly identified material. Citrin acts satisfactorily in hemorrhagic diseases in which the capillary resistance is impaired, but it has a noteworthy effect also in other pathologic conditions of the blood. Efforts should be made to find a more exact method for the detection of vitamin P in order to determine its absence from the diet. *Maand. V. Kindergen. vol. 10, p. 339.*

VITAMIN K

The anti-bleeding vitamin K may help to check hemorrhage in patients with tuberculosis of the lungs, Dr. R. F. Sheely, of the White Haven, Pa., Sanatorium, reports (*Journal, American Medical Association*, Nov. 8).

In four patients given doses of this vitamin after they had had hemorrhage the bleeding was checked fairly quickly, judging by the fact that within a day or two after the vitamin treatment the sputum was no longer streaked with blood.

Vitamin K acts to check bleeding by stimulating production of prothrombin, a substance necessary for the normal clotting of blood that is shed. A significant deficiency of prothrombin was found in 51 of 106 patients with active and chronic pulmonary tuberculosis, Dr. Sheely reports. The sicker the patient, the greater was the prothrombin deficiency. Dr. Sheely believes that the prothrombin deficiency in tuberculous patients can be relieved by injections of vitamin K. This would also increase the tendency to clotting of the blood, which would help to control spontaneous hemorrahage and would also help to prevent hemorrhage if surgical operations needed to be performed on the patients. *Science News Letter, November 15, 1941.*

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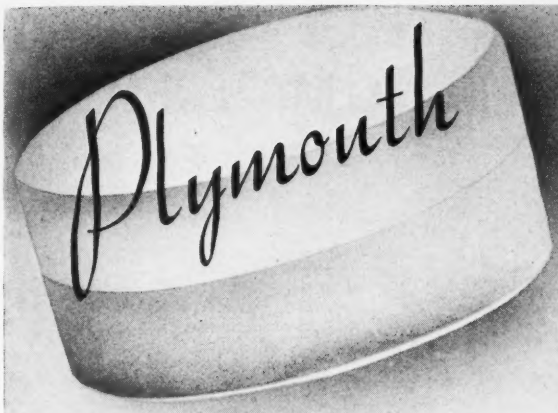

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PRESERVING ESSENTIAL OILS: We manufacture essential oils and aromatics. Our customers are in every part of this country and therefore our products must withstand a great variety of climates. We should like to add a stabilizer or preservative to prevent the oils from going bad and would like your comments on the use of methyl parahydroxy benzoate. Santiago de Chile.

We believe you will find an article on "Storing Essential Oils," appearing in the April 1941 issue of this magazine, to be quite useful since it gives all the information we have available on the preserving of essential oils. The preservative you mention is probably of little value in this application.

REDUCING CREAM: Will you please send me a formula for a reducing cream and a good body massage cream that I can use in my treatments? Los Angeles.

We know of no type of external preparation that is of any use at all as a reducing preparation. A quite satisfactory massage cream can be made along the lines of a liquefying cleansing cream. A product of this type consists of mineral oil, thickened and solidified by the addition of petrolatum and paraffin. A typical formula would consist of:

Paraffin	20
Petrolatum	25
Mineral oil	55

Melt all these together, pour into jars, allow to cool.

GRAINY CREAM: We inclose a formula for a cleansing cream we have been manufacturing and which has been giving us trouble. After standing for a relatively short time, the cream becomes definitely grainy. A tissue cream of similar composition has been giving the same trouble. We would appreciate any suggestions you might be able to offer to remove this difficulty. Denver.

Your cream seems to be definitely unbalanced, with too little water to give a correct oil-in-water cream. We suggest that you add another quart or two of water to your batch to push the cream in the proper direction. If the cream is then too soft, increase the proportion of either the paraffin or the beeswax until the proper consistency is again obtained. The presence of both lecithin and cholesterin in the cream, may also tend to affect the balance adversely and these compounds may well be omitted from the formula. Finally, the graininess may be due to improper processing and temperature control. Be sure that the water added to the melted waxes and oils is either at the same temperature or slightly hotter. Stirring should be continued until the mixture is absolutely homogeneous.

NIGHT CREAM: Will you please help me with my night cream formula? The mixture I use is based upon absorption base and gives a creamy product which soon develops a light brown surface color. To prevent this I added a little magnesium sulfate but this caused separation of water. The addition of a little beeswax retarded water separation but did not prevent it completely. I should appreciate your suggestions for modifying this formula so I could get the type of product I am seeking. Chicago.

The brown discoloration you first notice is probably due to the separation of lanolin and mineral oil. Since the lanolin is very useful as an emollient, and as an emulsifier, it should be left in the formula. The mineral oil, however, may be omitted. It should be replaced by a little beeswax plus paraffin and petrolatum. Absorption base creams are very good when well made but sometimes have a bad tendency to separate if they are not properly balanced.

HONEY CREAM: I have been making a honey cream containing a substantial portion of honey and it has proven quite satisfactory except for the fact that when standing, especially in cold weather, the honey has a tendency to crystallize. I should like to prevent this crystallization since it makes the cream quite gritty. Brooklyn.

First you must check over the cream very carefully to make sure that the crystallization is due only to the honey and not to some of the waxes in your product. Honey is a natural mixture and has geen highly refined and may therefore be subject to crystallization. In the manufacture of cane sugar, it is not possible to obtain a crystalline product until the syrup is very highly purified, since very small amounts of impurities prevent crystallization of thick syrups. Therefore, it should be possible to prevent crystallization of honey by the addition of relatively small amounts of impurities such as are found in molasses, in which the syrup impurities are concentrated.

POWDER BASE: We have been asked to prepare a powder base lotion suitable for use on an oily skin and would appreciate any information you might give us about the formulation of a product of this type. Los Angeles.

A powder base lotion of the type you are interested in is very similar to a non-oily hand lotion. It can be made from stearic acid 2.0 parts, amino glycol 0.25, methyl cellulose 0.5 parts, alcohol 10.0 parts, glycerin 5.0 parts, and water to make 100.0 parts. Boil half of the water and pour it over the methyl cellulose, stirring and cooling until a mucilage is formed. Melt the stearic acid and add it to the amino glycol and glycerin dissolved in the rest of the water. Stir until thoroughly emulsified. When cold, add the methyl cellulose solution and stir in the perfume dissolved in the alcohol.

QUESTIONS

HAND LOTION: In making a hand lotion, we find that our preparation leaves a somewhat soapy film on the hands before being absorbed. Could the castile soap be omitted and an emulsifying agent such as sodium lauryl sulfate be substituted, and in what proportion? What is sorbitol, and how is it made? Kansas City.

The suggestion you make about sodium lauryl sulfate is a good one, since you have plenty of cetyl alcohol present. From one-tenth to one-half of one per cent. of the emulsifying agent should be sufficient. The soapiness, however, may be due to the presence of too much cetyl alcohol. Using the castile soap as you do now, reduce the cetyl alcohol content to 0.5 per cent. and add 2.0 per cent. of stearic acid. This should give you a whiter and less soapy lotion.

Sorbitol is a hexahydric alcohol made by the reduction of glucose and, in solution, has properties very similar to those of glycerin. It is not likely, however, to be irritating to sensitive skins.

MACHINELESS PERMANENT WAVE: We intend manufacturing a machineless permanent wave heating pad and would appreciate any information you can give us as to where we may obtain metal powders for this purpose. New York City.

At this particular time you might just as well give up any idea of making the heating pads you have in mi[illegible]ace the metal powders and metals that must be used a[illegible]ually unobtainable, even for those who have long been in the business, and even more difficult for newcomers to obtain.

WAVE SET: What are the characteristics of the various gums used in wave set preparations, and what additional ingredients are necessary to make a good product. New York.

Quince seed gives a product of very high quality which is stringy, quite transparent, and has a minimum tendency to form flakes. Its major disadvantage is the necessity of filtering the mucilage free from the seed husks. Tragacanth is high in price, but because very small proportions, even as low as one-tenth of one per cent., may be used, it is popular for wave set use. Most popular of all is gum karaya. This dissolves somewhat more rapidly and gives more nearly transparent solutions than those based upon tragacanth, but the gum is not always uniform in quality and separate batches must be tested before use. A very small amount of a mild alkali (sodium carbonate or borax) is often used with karaya to make the gum neutral. After addition of the alkali, the gum solution should be allowed to stand overnight and then tested with phenolphthalein test solution to make sure that the preparation is approximately neutral in reaction. Alkalinity is desirable to increase stringiness, but too high a concentration will result in eventual breakdown of the gum. The gum powder should be mixed with a little alcohol and the suspension poured into water with stirring to give a uniform solution. The alcohol also serves the useful purpose of increasing the drying speed. A little glycerin retards the tendency to flake, but too much will slow up the drying.

FEMININE HYGIENE JELLY: We wish to obtain a good formula for a feminine hygiene jelly, and we wondered if you could suggest someone who we could contact that would be able to give us the best information as to the type of jelly that has been found most satisfactory. St. Louis.

Feminine hygiene jellies are for the most part based upon tragacanth and karaya gum, small amounts of glycerine to prevent dehydration of the jelly, and a spermicide agent. You can get your best information as to the most acceptable type by examining several of the more popular products available on the market. Three parts of tragacanth should be mixed with ten parts of glycerine and quickly stirred into a mixture of two parts of lactic acid in 85 parts of water. A small amount of preservative such as methyl parahydroxybenzoate should be included to prevent decomposition of the gum. Some preparations of this type include a small amount of oxyquinoline sulfate as the active ingredient, but we believe that the acid is just as active and less likely to cause irritation.

MANICURE: We wish to increase the number of items in our manicure line by the addition of a cuticle cream and a cuticle remover. Can you give us any information regarding the composition of of items of this type, with formulas, if possible? Chicago.

A good cuticle cream, to keep the cuticle soft, can be made from lanolin, petrolatum, and water. A small amount of oil-soluble color may be added, if desired. Melt the lanolin and petrolatum together at a low temperature and stir in the water a little at a time.

Lanolin	20.0
Petrolatum	35.0
Water	45.0

A cuticle remover may be made by dissolving a small proportion of sodium hydroxide in water or rose water. A little glycerin may also be included to assist in the softening process.

Sodium hydroxide	5.0
Glycerin	5.0
Water	90.0

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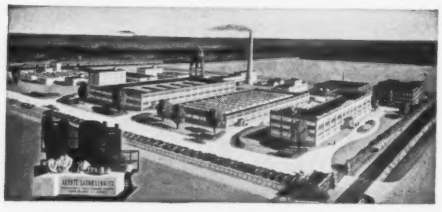

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Anethol 10c
Anise oil 5c
Balsam Tolu 7c
Bay oil 10c
Benzoin gum, Siam 85c
Sumatra 2c
Bergamot oil $10
Buchu leaves 2c
Caraway oil $1
Cassia oil, Redist. $1.50
Cedar-wood oil 5c
Clove oil 5c
Dill oil 75c
Eucalyptol 20c
Eucalyptus oil 3c
Geranium oil, African $1
Bourbon $1
Ginger oil 50c
Heliotropin 50c
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Iso Eugenol 25c
Jalap root 1c
Karaya gum 1c
Lemon grass oil 15c
Lime oil, dist. 25c
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Manna, large 35c
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Menthol $1
Methyl Benzoate 40c
Nutmeg oil 35c
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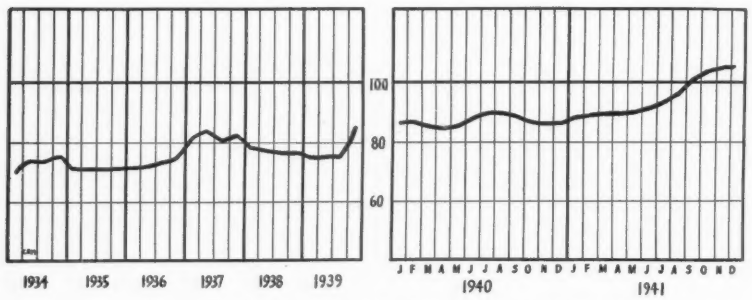
Redist. 65c
Pimento leaf oil $1.10
Rosemary oil 15c
Saffron American 40c
Spanish $1
Sassafras oil 45c
Artificial 30c
Senega root 3c
Spearmint oil 45c
Valerian root 45c
Wild cherry bark, gr. 4c
Wormseed oil 10c

Down

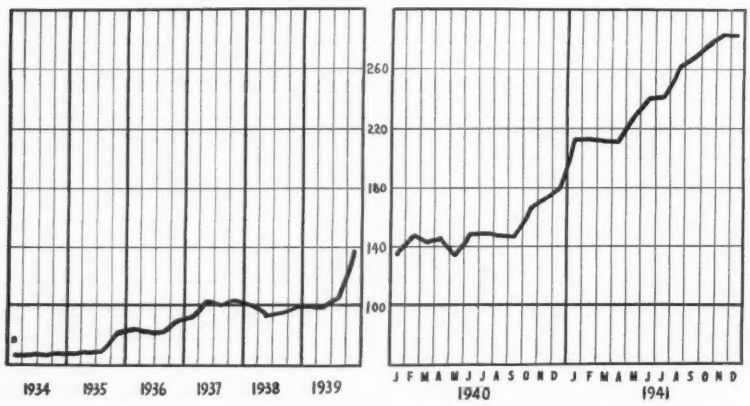
Arabic gum, sorts ½c
Balsam Peru 10c
Coriander oil $1
Glycerin, CP 1½c
Henbane leaves 15c
Stramonium leaves 8c
Vanilla beans, Bourbon $1.50
Mex. cuts $2
Mex. whole $1.50

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



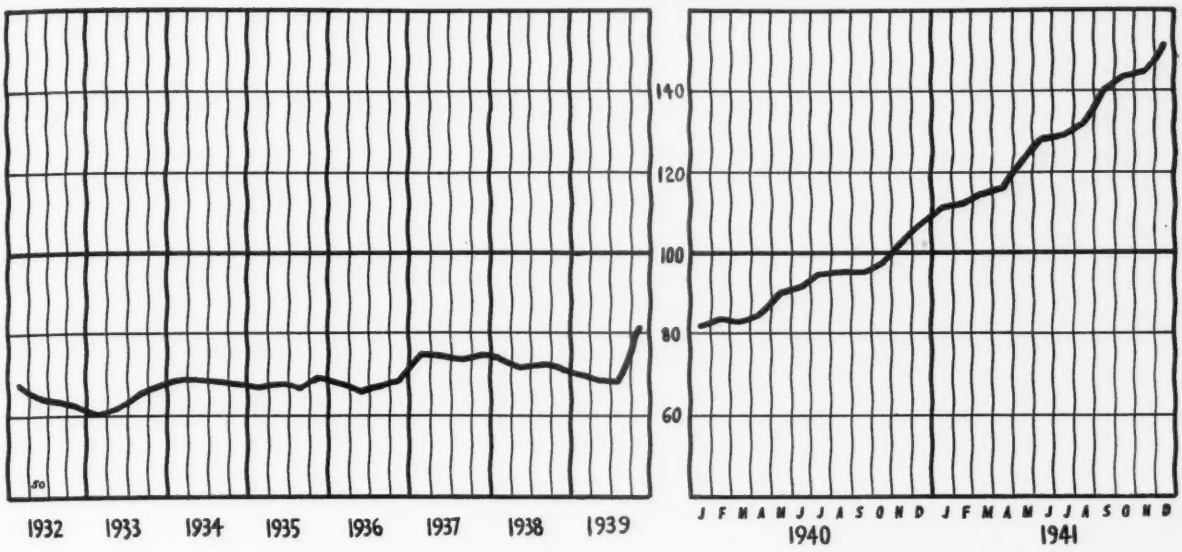
The cosmetic raw materials index advanced fractionally to 104.9 from the previous 104.8. Balsam Tolu was up to 95 cents a pound, whereas Balsam Peru declined slightly to $1.25. Glycerin was lower at 19¾ cents but this was offset by the sharp rise in menthol, now offered in limited lots only at $9 a pound. The advent of a good quality domestic talc offered a possible period of relief from shortages in the imported grades.

15 Botanicals—Weighted Price Index. 1926=100.



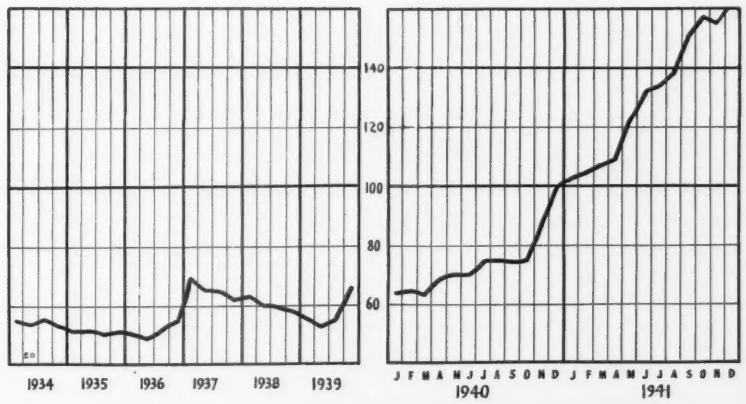
The botanicals index declined fractionally to 283.3 from the previous 283.9. This was occasioned primarily by the decline in the spot market price of licorice root. Agar agar was up to $2.50 a pound; aloes advanced 2 cents to 72 cents; Balsam Tolu was higher at 95 cents, and buchu now cost 2 cents a pound more with the price at 74 cents.

50 Raw Materials—Weighted Price Index. 1926=100.



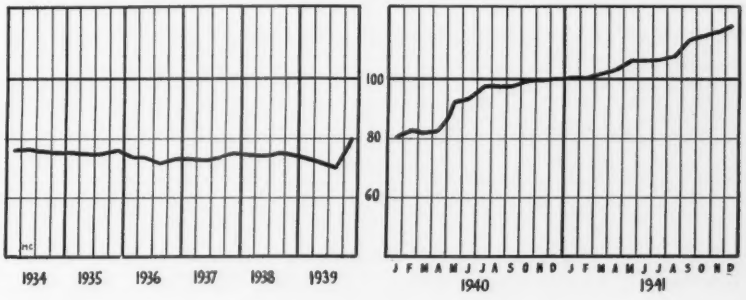
The price index of fifty commodities for November, 1941 increased from 144.5 to 151.2. As accumulated stocks of raw materials in the hands of consumers and dealers, bought up at more favorable prices than those now existing, are gradually depleted, and new purchases have to be made at twice or three times the former cost, and in some cases ten times the pre-war prices, serious thought must be given to the possible duration of the war.

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oil index was up to 173.2 from the previous 155.3. Anise oil rose 5 cents to $1.10 a pound; Bergamot was sharply higher at $30 a pound and practically nominal at this figure; cassia reached a new high at $7.50 a pound; clove oil advanced 5 cents to $1.35; geranium rose one more dollar to $17, and domestic peppermint was also advanced sharply to $4.50. The situation as a whole was one of continued shortages and constantly advancing prices.

15 Medicinal Chemicals—Weighted Price Index. 1926=100.



Medicinal chemicals index advanced to 118.1 from the previous 116.8. Mercury was higher at $200 a flask and menthol went up another dollar a pound to $9. Of interest was a report that approximately 80 tons of citronella oil was recently lost at sea. Such a development is regarded as highly significant as from this material could be produced about 1,000 cases of synthetic menthol.

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• Prices quoted in this section were current on the first of this month.

PARAFFIN WAX

Price schedule No. 42, setting top prices for grades of crude scale, semi-refined, and refined paraffin wax, was announced in Washington by Administrator Leon Henderson, Office of Price Administration. Crude scale wax, both white and yellow, has price limitations ranging from a maximum of 4.25c per pound in loosely packed barrel shipments to 5.25c per pound, depending on the melting point.

Prices on semi-refined wax, the term applied to wax which has an oil and moisture content below 1 per cent., are within the same range, while prices of fully refined wax range from 5c on wax with a melting point of 120-122 degrees to 10.5c for a melting point of 149-151 degrees, the O.P.A. disclosed.

The schedule, which became effective December 1, sets forth maximum prices for shipments of crude scale, semi-refined, and fully refined wax in lots of 10,000 pounds or more, with differentials on smaller shipments on a delivered basis.

Basing points, on which maximum prices apply on an f.o.b. seller's shipping point basis, are established as follows: Whiting, Ind,; New York, N. Y.; Philadelphia, Pa.; New Orleans, La.; and Texas Gulf Ports.

Mr. Henderson acted, it was said, because prices of crude scale paraffin wax have risen sharply in recent months.

PEPPERMINT OIL

Both oil of peppermint and menthol, which have already seen a long series of price advances, bounded up sharply during the current trading period. Quotations for natural peppermint oil now range from $4.50 to $5.00 a pound while redistilled oil is being offered at from $4.75 to $5.25 a pound. Natural menthol is at a new high level with the range at from $9 to $9.25 a pound.

No more imports of menthol are coming in under current conditions, and it is believed that home grown peppermint oil is being used as a substitute and as a means of stretching the available supply. Some factors in the trade consider it possible that ships which carried arms to Russia might return to Pacific ports with Russian peppermint oil, but no definite information is available on this score. As a natural consequence of the increased demand for peppermint oil, growers in the country are asking higher prices for the raw materials.

MERCURY

A rather sharp advance featured the mercury market during the current period of review with spot metal now selling at $200 a flask. Arrival of colder weather usually brings a reduction in output since many mines are forced to close down, but in view of current high prices, some trade factors are of the opinion that every effort will be made to continue operations throughout the coming season, especially since the metal is of considerable importance to the present emergency.

Mercury is now being mined on a large scale in Idaho, which until three or four years ago did not figure as a mercury-mining state at all, the U. S. Geological Survey states. One mine, in the Weiser deposits 50 miles northwest of Boise, is already in large-scale production. Another has just been opened, in another ore body some distance away, in the eastern part of the state. Still others are in prospect.

It is daid that the ore body extends over more than 100 acres, but only a fraction of this has been thoroughly explored. The ore is mined from shallow excavations as well as from some subsurface workings and yields 5 to 15 pounds of mercury to the ton.

ATROPINE

There were some reports during the period under review to the effect that atropine was so scarce as to make it likely all preparations containing it would have to be discontinued within six months. This statement seems entirely too drastic in view of the actual facts. There have been difficulties in connection with atropine because nearly all supplies of this alkaloid were imported prior to the war. There have, likewise, been difficulties in securing satisfactory raw materials. Certain factors here, however, have made atropine a leading objective and have undergone substantial risks and heavy expense in an endeavor to supply all necessary needs.

At the present time virtually all back orders have been filled and the supply position is fairly good. It is generally believed that it will be possible to keep necessary needs for atropine supplied so long as raw material sources are not shut off and such shipments arrive safely and, after arrival, are of satisfactory quality to permit the manufacture of the alkaloid. It was pointed out that manufacturers of atropine have been paying cash for the raw material without any means of checking the quality and that at least one large shipment reached here which turned out to contain no alkaloids at all.

Atropine is extracted from belladonna root. Belladonna is characteristic of Central and Southern Europe, although it will grow well under cultivation in the United States. Experimental plantings of belladonna in California indicate a high grade material can be produced there and that the plants are very rich in active constituents.

ALCOHOL

Ten million bushels of corn now stored in commercial warehouses throughout the middle west by the Commodity Credit Corporation have been set aside for the production of ethyl alcohol to be used in the manufacture of smokeless powder, the War Department announced recently.

Another ten million bushels are being held in reserve for possible use later.

It is hoped that as a result of this additional supply of raw materials becoming available, more industrial alcohol will become available for the drug and toilet goods industry.

The first three concerns to receive awards for distilling alcohol from government corn are the Lawrenceburg, Indiana, plant of Joseph E. Seagram & Sons, Inc., the Lawrenceburg plant of the Clifton Spring Distilling Co., a subsidiary of Schenley, and the National Distillers Products Corp., New York City. Other distilleries are expected to participate in the program soon.

Producing at a rate better than 54 per cent. over a year ago, industrial alcohol distillers forced production to 36,392,523 proof gallons during the month of October, the Alcohol Tax Unit of the United States Treasury Department reported yesterday.

This record alcohol production does not include any of the defense alcohol which the whiskey distillers are making for munitions starting with the current month. This will amount to about

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8,000,000 proof gallons or more per month when all of the facilities are engaged.

The industrial alcohol industry's 36,392,523 gallon output of ethyl alcohol for October compares with 35,757,000 gallons produced in September, and with 23,595,000 gallons made during October, 1940.

While a large and growing percentage of the industry's output is entering direct defense uses, such as smokeless powder and other munitions activities, private estimates indicate that indirect defense and civilian consumption still accounts for a large part of alcohol uses. It is figured that some 41 per cent. is taken for anti-freeze purposes, and about 16.5 per cent. for industrial solvents. Lacquer and chemical manufacturers consume some 16.4 per cent., pharmaceuticals about 4.1 per cent., and toilet preparations and cosmetics, 4.1 per cent.

The Alcohol Tax Unit reports ethyl alcohol production for the fiscal period, July 1, to October 31, this year, at 139,469,230 proof gallons compared with 91,705,746 gallons during the corresponding period last year.

Ethyl stocks in bonded warehouses at the close of October were 7,142,903 proof gallons (less than 4,000,000 wine gallons), compared with 13,471,330 proof gallons at the end of October, 1940.

Withdrawals of tax-free ethyl alcohol during October amounted to 32,604,165 proof gallons, against 25,556,712 gallons a year ago, and for the fiscal period, 117,929,024 gallons, against 90,308,532 gallons in the same time last year.

Production of completely denatured alcohol totaled 3,600,439 proof gallons during October, compared with 4,811,979 gallons in October, 1940, and for the fiscal period so far, 9,507,943 gallons, against 10,600,816 gallons a year previous. Stocks at the close of the month were 260,134 gallons, compared with 580,542 gallons a year ago.

Production of specially denatured alcohol during October amounted to 14,584,252 proof gallons, according to the report, which compares with 10,286,463 gallons produced in October, 1940. For the July-October period, production of specially denatured alcohol totaled 55,891,717 proof gallons, contrasted with 40,143,390 gallons in the corresponding months of 1940.

There is some reason to figure, according to trade opinion, that defense and industrial alcohol requirements will be met over most of 1942, although control will probably be extended over its distribution. The industrial alcohol makers are currently producing at a rate nearer to 19,000,000 wine gallons a month, as against an estimate of 18,000,000 some time ago. This is equal to 228,000,000 wine gallons, or 433,200,000 proof gallons on an annual basis.

Provided with ample supplies of the raw material (molasses in the instance of the fermentation plants) it is possible that this heavy contribution may be bettered by the industrial alcohol plants, it was thought. The raw material situation, however, is not fully assuring, and may remain uncertain pending outcome of present arrangements with sugar-producing countries for supplies of food sugar and molasses for alcohol manufacture during 1942.

The alcohol manufacturer who is producing 4,000,000 tons of defense alcohol from sugar had to be granted special dispensation from the price ceilings to carry out this arrangement. The assistance of the Department of Agriculture likewise had to be enlisted in providing the alcohol beverage distillers with corn at a suitably low price, and one that would not disturb the molasses-alcohol price relationship.

In the paint and lacquer industry recently it was estimated that possibly 300,000,000 wine gallons of alcohol will be needed to take care of defense and industry demands during 1942, or a certain 280,000,000 gallons minimum. In normal times 100,000,000 wine gallons would be considered a "good year."

MAGNESIUM

Using for the first time a device which is expected to act as an important check on producer and manufacturer inventory reports, the Office of Production Management tightened its control over magnesium and moved to acquire stocks of scrap and semi-finished magnesium products.

An unusual provision in the order (M-2-B) gives the O.P.M. a "double-check" on stock reports by requiring warehouses and other agents to report stocks under their care. A similar requirement is expected to be incorporated in future mandatory orders. O.P.M. officials believe that there are stored stocks not previously reported and which can provide amounts of metal to relieve the present shortage to some degree.

The new order directs that all magnesium and magnesium products, in whatever form or by whomever held, not now being used to fill defense orders with ratings of A-1-J or higher, be reported to O.P.M. before November 30, 1941, and be held for sale to a producer or an approved smelter so that the metal will become available for defense uses.

Magnesium has been under priority control since March 24, 1941. The new order, however, greatly strengthens and expands the control. The order provides for complete allocation of all magnesium by the Director of Priorities on a monthly basis.

It was emphasized the order applies to all persons and to any product, the principal ingredient of which is magnesium. Contamination or debasement of magnesium is forbidden, and scrap owners or plants producing scrap are ordered to collect, label and segregate it.

The usual clause providing for special consideration if unusual hardships are caused is contained in the order, and all exceptions to the general provisions are left to the discretion of the Director of Priorities.

MENTHOL

A quiet tone prevailed in the spot market for menthol. Everyone appears to be influenced by developments in Washington. Importers stated that the market is going through a period of watchful waiting. The situation is such, however, that this did not prevent the spot market from advancing to a new high level. Both Japanese and Chinese goods were officially quoted at from $9 to $9.25 a pound.

BROMINE

Bromine, in which monopoly control was wrested from Germany some years ago when chemical manufacturers here placed the chemical in large-scale production from seawater and inland brines, has sustained an output reduction of some 25 per cent. owing to the chlorine shortage, it was learned recently.

Manufacturers with large facilities for bromine production are not able to take full advantage of their processes as chlorine, a defense chemical in very heavy demand, is required to liberate bromine from the brine.

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Index to Advertisers

Abbe Engineering Co. 683
Abbott Laboratories 700
Allied Products, Inc. 610
Aluminum Co. of America 615
Aluminum Seal Co. ..... Insert facing 649
American Can Co. 621
American Colloid Co. 709
American Cyanamid & Chem. Corp. ..... Insert between 624, 625
Anchor-Hocking Glass Corp. 618
Ansbacher-Siegle Corp. 704
Atlantic Refining Co. 692

Baker Chemical Co., J. T. ..... Insert facing 664
Braun & Co., W. 709
Bridgeport Metal Goods Mfg. Co. 686
Brown Bag Filling Machine Co. 680
Bush & Co., W. J. 706

Calco Chemical Co., Inc. 692
California Fruit Growers Exchange 656, 700
Carr-Lowrey Glass Co. ..... Insert between 664, 665
Cavalla, Inc., A. 682
Celluplastic Corp. 684
Chiris Co., Antoine 620
Chrystal & Co., Chas. B. 704
Colgate-Palmolive-Peet 708
Colton Co., Arthur 680
Commercial Solvents Corp. ..... Insert facing 624
Consolidated Fruit Jar Co. 709
Consolidated Products Co., Inc. 708
Crown Cork & Seal Co. 609

Dodge & Olcott Co. ..... Insert between 616, 617
Dow Chemical Co. 654
Drury & Co., Inc., A. C. ..... Insert facing 617
du Pont de Nemours & Co., Inc., E. I. ..... Insert between 664, 665

Durlin Corp. 695
Duval Compagnie 709

Edwal Labs., Inc. 658
Ertel Engineering Corp. 680
Evans Chemetics, Inc. 612

Felton Chemical Co., Inc. ..... Insert facing 604
Fezandie & Sperrle, Inc. 708
Filter Paper Co., The 682
Firmenich & Co., Inc. ..... Insert between 648, 649
Florasynth Labs. 605

Frank-Vliet Co. 700
Franks Chemical Prod. Co., Inc. 711
French, Inc., Benj. 704
Fritzsche Bros. ..... Insert between 688, 689

General Drug Co. ..... Insert facing 621
Gesell, Inc., R. 701
Givaudan-Delawanna, Inc. ..... Insert between 620, 621
Goldschmidt Corp., Th. ..... Insert facing 613
Greeff Co., Inc., R. W. 708

Hagerty Bros. & Co. 683
Helfrich Labs., Inc. 604
Heyden Chemical Corp. ..... Insert facing 620
Hopkins & Co., J. L. 670
Hormann & Co., Inc., F. R. 683
Horn, John 682
Huisking & Co., Inc., Chas. L. 697

Industrial Chemical Sales ..... Cover 2
Innis, Speiden & Co., Inc. 684
Interstate Color Co., Inc. 709

Jelly & Co., Walter H. 706

Kelton Cosmetic Co. 704
Kimble Glass Co. ..... Insert facing 616
Kohnstamm & Co., H. 694
Kolmar Laboratories 650

Leeben Chemical Co., Inc. 709
Leonhard Wax Co., Theodor 708
Lowe Paper Co. 660
Lueders & Co., George ..... Insert facing 612
Lusteroid Container Co. 668

Magnus, Mabee & Reynard, Inc. 613
Mallinckrodt Chemical Works ..... Insert between 624, 625
McKesson & Robbins, Inc. 696
Merck & Co. 619
Monsanto Chemical Co. 666

National Can Co. 606, 607
Naugatuck Aromatics 601
New England Collapsible Tube Co. 646
New Jersey Machine Corp. 678
N. Y. Quinine & Chemical Works 623
Norda Essential Oil & Chemical Co. 616
Northwestern Chemical Co. 701

Orbis Products Corp. ..... Insert facing 665
Oxzyn Sales Co. 617

Package Machinery Co. 674
Parento Inc., Compagnie 690
Paris Cosmetics, Inc. ..... Insert facing 648
Parsons Imports, M. W. 695
Penick & Co., S. B. ..... Insert facing 605
Pennsylvania Glass Products Co. ..... Insert between 648, 649
Pfaltz & Bauer Co., Inc. 708
Pfizer & Co., Inc., Chas. ..... Cover 4
Powell & Co., Inc., John 668
Progressive Machine Works, Inc. 708
Pulverizing Machinery Co. 683

Ritchie & Co., W. C. 682
Rosenthal Co., Inc., H. H. 706

Schimmel & Co., Inc. 622
Schmidt Co., George A. 708
Schofield-Donald Co., Inc. 690
Scovill Manufacturing Co. 652
Seydel Chemical Co. 709
Sherwood Refining Co. 701
Solo Labs. 682
Sonneborn Sons, Inc., L. 644, 645
Standard Alcohol Company 694
Standard Oil Co., (Indiana) 603
Standard Synthetics, Inc. 611
Stokes Machine Co., F. J. 672
Sturge Ltd., John & E. 662
Swindell Bros., Inc. 608
Synfleur Scientific Labs. 614

Thurston & Braidich 706
Tombarel Products Corp. 697

Ungerer & Co., Inc. ..... Cover 3
U. S. Bottlers Machinery Co. 676
U. S. Industrial Chemicals, Inc. ..... Insert between 656, 657

van Ameringen Haebler, Inc. ..... Insert between 604, 605
Van Dyk & Co. 709
Verley Inc., Albert ..... Insert between 608, 609

Whittaker, Clark & Daniels, Inc. 686
Will & Baumer Candle Co. 696
Wilson Laboratories, Inc. 712
Wolf & Co., Jacques 696

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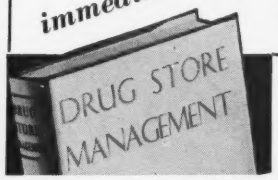

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- COSMETIC COLORS—TABLE OF CERTIFIED COLORS
- EMULSIONS—Patent Digest
- COLD CREAMS AND OTHER COSMETIC CREAMS—Patent Digest
- LOTIONS—Patent Digest
- FACE POWDER—MISCELLANEOUS POWDERS—Patent Digest
- MAKE-UP—Patent Digest
- MISCELLANEOUS COSMETIC PREPARATION—Patent Digest
- THE FEDERAL FOOD, DRUG AND COSMETIC ACT OF 1938
- APPENDIX AND TABLES
- BIBLIOGRAPHY
- INDEX

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